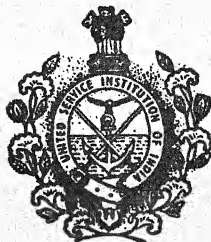


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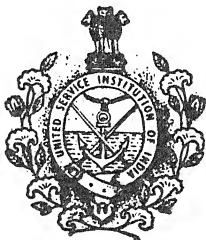
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in general and of the
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NOTE

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Needed - A System's Approach

"National Strategy" as defined in the Dictionary of US Military Terms for Joint Usage, is "the art and science of developing and using the political, economic and psychological power of a nation, together with its armed forces during peace and war to secure national objectives".

This definition is relevant in the context of the announcement by the Prime Minister about the formation of the National Security Council. It brings into sharp focus the need to examine the use of all national resources while formulating national strategy and calls for an integrated systems approach at the macro-level to ensure a strategy of optimum utilisation of available resources to attain the desired objective.

So far it has been the practice to consider security options at the micro-level, in water-tight compartments. It was either diplomacy or war -- both could not be used together. Clausewitz had been often misquoted that "war was a continuation of policy by other means", implying that when diplomacy failed, the military means were employed to achieve the objective. This is not entirely correct. Military option is used alongwith the politico-diplomatic option. And perhaps economic and psychological means could also be combined with the others to obtain synergic interaction; thus creating a whole greater than the sum of its parts.

It may not be necessary here to explicate the normative approach to planning for long-term National Security. This approach has been followed in the past with grave consequences as clearly evident from the two talks, on air and ground operations in the Western Sector during 1971 conflict with Pakistan, which have been reproduced in this issue of the Journal. In the first of these, Air Marshal CV Gole highlights the lack of joint planning between the Army and the Air Force. In the second talk, Lt General RK Jasbir Singh reflects on the confusion created by lack of communications during the heat of the battle. In both cases, better results could have been achieved by an integrated systems approach to strategic planning.

Therefore, at the military level, the three wings of the armed forces, and at the national level, the political, economic and psychological power has to be combined to evolve a long-term strategy. The newly formed National Security Council and its Secretariat would be well advised to consider the systems approach for evolving our response to the security challenges the nation may face in the years to come.

Air Operations in the Western Sector During 1971 Indo-Pak War*

AIR MARSHAL C V GOLE PVS, AVSM (RETD)**

The subject suggested by the United Service Institution for my talk today is rather specific. In fact, I accepted the task with some trepidation. The main reasons were, firstly, that the conflict in the Western theatre never really developed into an all out war. Secondly, it is doubtful whether a blow-by-blow account of the air operations, however interesting or absorbing it may be, would be of much relevance after 18 years during which period radical changes have taken place in geopolitical environment, operational concepts, military technology, force levels and weapons. Thirdly, like any other historical event, no two views of a battle are identical, specially for want of an authenticated published diary, report or documentary history from the Indian side. There are, of course, a number of books written by senior officers and experts, but these give their personal perspective and interpretation. Therefore, I felt that instead of restricting the talk to day-by-day account, it may be more profitable and relevant at this stage, if one takes a broader perspective, covering aspects like the obtaining environment, concepts and objectives, plans made, their implementation, the result achieved and an analysis of their relevance to the present day situation, if any.

GEO-POLITICAL ENVIRONMENT

Here, I may devote a little time to the obtaining environment in 1969-71 which spawned the struggle for Bangladesh and the consequent Indo-Pak conflict of 1971. That this conflict was not of India's making is well known. It was entirely instigated, recklessly advocated and finally invoked by Pakistan. While one can perhaps understand, though not condone, Pakistan's desperate, ruthless and of course, thoughtless military action in the erstwhile East Pakistan, its suicidal compulsion to seek a major conflict with India is not quite understandable given the disparity of forces claimed by Pakistan. Perhaps, Pakistan was under the misplaced notion of a Pakistani David against the Indian GOLIATH, so assiduously cultivated by Pakistan after the 1965 conflict.

The origin of the struggle of the Bengalis against the autocratic overlordship of West Pakistanis, and their aspirations for restoring parity between the two sections of Pakistan is well known to most of us. These were enunciated in the six point programme presented by Sheikh Mujibur Rahman as early as in February 1966. The political events of subsequent

* Text of a talk given to the members of the USI of India on August 23, 1989.

** A former Air Officer Commanding-in-Chief and Deputy Chief of the Air Staff.

years had worsened the East-West relations, finally leading to the trumped-up "Agartala Conspiracy Case" in June 1968 when the Sheikh and his Awami League leaders were arrested for anti-national crimes. This strong action was condemned by a number of political leaders within West Pakistan itself, who were fed up with the autocratic rule of Gen Ayub Khan. The conditions were thus ripe for a major up-rising. However, the final spark in the tinder box was a "believe-it-or-not" event of 7 November, 1968. A bunch of Rawalpindi students were caught by Pakistani Customs bringing in smuggled goods from Landi Kotal on the Pak-Afghan border. Protest by these students sparked of a nation-wide strike which, added and abetted by Mr Bhutto, mushroomed into a general uprising, weakening Gen Ayub Khan's hold and finally forcing him to retire after handing over the reins to Gen Yahya Khan, the Army C-in-C. The downhill race started thereafter.

On taking over as the President and the Chief Martial Law Administrator, Gen Yahya Khan had assured the nation of transfer of power to a civilian government at the earliest. Accordingly elections to the national assembly were held in December 1969. Much to his dismay the outcome was startling wherein Mujib's Awami League achieved an outstanding victory in East Pakistan, with Bhutto's PPP scoring similarly in the West. This led to further agitations specially by East Pakistanis for early transfer of power to the elected Govt. and for implementation of Mujib's 6 point programme. The intransigence and obduracy of Pakistani Central Government, however, culminated in March, 1971 in a general uprising in East Pakistan with the declaration of an independent state named Bangladesh, with its own flag and national anthem. Yahya's reaction was to clamp down Martial Law in East Pakistan, launching a ruthless military campaign to stamp out the uprising. This persecution led to a trail of refugees, both Hindus and Muslims, trekking into India. The trail soon became a torrent by July and India was a helpless recipient of nearly 7 million refugees. By December, this figure had swollen to nearly 10 million.

This was indeed then a demographic aggression forced by Pakistan on India. Till March, India was a mere by-stander, though reasonably worried and apprehensive. The uprising on 26 March and Bangladeshi expectations of direct support from India, brought the realisation of a likely requirement of some direct action by India. However, to avoid a military confrontation, India made a number of diplomatic moves and appealed to the major nations to help in averting such a crisis.

Instead of seeing the writings on the wall, Yahya chose to blame and accuse India of subversion and interference in Pakistan's internal affairs. In July, Yahya spoke, for the first time, of a total war with India. This was followed by another warning on September 1 in his interview to

Le Figaro. Increasing harassment by Bangladeshi guerrillas brought about increasingly frenzied reaction by Pakistani forces and by November incursion by Pakistani Army and Air Force into Indian territory, became frequent. Finally, on 22 November, direct action had to be taken by India. Four Sabres intruded into Indian air space in the Boyra Salient. Four Gnats of Kalaikunda detachment at DUM DUM were scrambled and intercepted these Sabres and shot down three ; one got away. Indian Air Force had fired its first shot in anger. On 23 November, Yahya promised to wage a total war against India in ten days. He kept his promise, and so began the 1971 Indo-Pak conflict.

PRELUDE

With the Bangla uprising in March, 1971, and the increasing pressure from Bangladesh leaders for Indian support, the inevitability of some Indian response became apparent. On 27 March, the Prime Minister called a meeting of the Defence Minister and the three Service Chiefs to review the situation and Indian preparedness. This was the first hint of a likely military involvement. The hint was well taken. The three services started taking stock of their state of preparedness, training, serviceability and availability of weapon systems, and the inventory. The IAF found itself fairly well-equipped and trained except for night operations and low level air defence capability. Among the various measures taken to improve the state of preparedness of the Air Force, a delegation under the VCAS, was sent to the USSR to assess and evaluate the aircraft and weapon systems offered by the Soviets to make up these shortcomings. However, what was offered by them was either not suitable or not available in the desired timeframe. In any case, it was too late to acquire, assimilate and bring to operational readiness any new weapon system within anticipated timeframe. The offer, therefore, had to be declined. A more pragmatic way was to enhance the operational effectiveness and availability of the existing equipment.

By July, after Yahya's first threat of an all out war, there was open speculation in India of a third round with Pakistan. In August, Exercise 'CACTUS LILY' was declared - which so far as Defence Services were concerned, was the declaration of Emergency or imminence of War. The real military preparations began thereafter.

PREPARATIONS

It was fortunate that ample time was made available to the Services to prepare for the eventuality of a War with Pakistan. After the main objectives were fixed at inter-service level, each service worked out its own war plans. At the top level certain basic priorities were fixed, based on

the three Chiefs' reading of Pakistani intentions. Special efforts were made to gather information and build up intelligence about enemy's capabilities, his Orbat and his resources. Initially, it was felt that Pakistan could not support any major operation in the East and hence would try to alleviate pressure in the East by opening a powerful offensive in the West. Attempts were made to gather and analyse intelligence gained from the Bengali defectors. However, in substance, not much was gained because the defectors were either not of high enough ranks to be in the know of higher plans or were deliberately kept in the dark by Punjabi Commanders dominating the forces. In fact, in some cases, this half baked information was counter productive. For instance, it was surmised that the forces in East Pakistan had been substantially bolstered up, though in reality only one Division plus, and half a fighter Squadron were added. On our side this resulted in transfer of increasing number of troops from West to East and tying down the Air Force Squadrons in the East. A major consequence was that the main role of Western Command changed from offensive to defensive. Some major and minor changes were, in a way, inevitable in a fluid situation, but had they been based on more accurate intelligence, they would have been much more productive. In the event, however, Chiefs of Staff spelt out the following main objectives in order of priority :

(a) To gain as much ground as possible in East Pakistan and to neutralise Pak forces to the extent possible. It is interesting to note that even at this stage total collapse in East Pakistan was not envisaged because of the supposedly large Pak forces.

(b) To hold against any Pak offensive in the West. Some limited offensives, mainly to rationalise the border, were however permitted. Since UN or the major nations were expected to intervene soon enough, major territorial gains in the West were not envisaged nor was there any intention to destroy West Pakistan.

PAKISTANI ASSESSMENT

It is interesting to see what Pakistani thinking was on this issue. In keeping with their almost dogmatic belief that defence of the East lay in offensive in the West, the Pakistani top brass had proposed opening the war with a major offensive in the West. The actual location was to be decided after a few probing thrusts. To that extent, therefore, not much consideration was given to the East, except giving them enough troops to hold Indian offensive for a limited period. For the benefit of Bengalis, however, repeated declarations and promises were made for increased military build up. Whether intentional or not, this did cause India to over provide in the East and thus abandon an opening offensive or a counter offensive

in the West. If this was deliberate, than Yahya must be given more credit for shrewdness than generally acknowledged. In the event, Pak offensive in the West also never got off the ground, Gen Tikka Khan being "frozen" time and again. In the East, the heavier Indian forces not only overcame Pak defensive positions but also brought about total collapse not envisaged in such a short period.

Once the three Chiefs agreed on the principle objectives, Air Force set about working out its own plans.

As early as in 1969, the Air Force had initiated an internal debate on the operational priorities. The massive bombing operations of World War II had left behind their legacy. In the thinking of most of the Air Forces, Counter Air and strategic operations had assumed prime importance. The generally accepted priorities at that time, were Strategic/Counter Air Operations, Air Defence, Close Air Support, Reconnaissance and other miscellaneous tasks, in that order. The IAF had tried this out in 1965 conflict, laying main stress on counter Air Operations with Canberras, Hunters and Mysteres and had paid rather heavily. There was, therefore some rethinking needed.

Commanders at various levels were consulted and discussions were held at Command and Air Headquarters. The new priorities that emerged were :

- (a) Air Defence of own air space and establishment of favourable air situation over specific areas as required by the ground forces.
- (b) Offensive Air support (i.e. close air support and interdiction)
- (c) Reconnaissance
- (d) Counter Air against enemy air fields and support installation.
- (e) Offensive strikes against other targets of importance.
- (f) Support to the Navy and other special tasks.

AIR DEFENCE

While planning for Air Defence some serious short-comings emerged. These were :

- (a) Inadequate Radar cover at medium and high altitudes.

(b) Total lack of detection and identification capabilities against low-level intruders.

(c) Lack of suitable Air borne interception radars and air-to-air missiles which could be used at low levels by our fighters.

(d) Lack of adequate modern AD Artillery (e.g. L-70 guns) and surface-to-air missiles (SAMS) to defend important VAs and VPs.

The inadequacy of Radar cover and lack of dedicated and reliable Air defence communications, forced the IAF to evolve the Base Air Defence concept where important bases with aircraft and AD weapons were given local autonomy, without conflicting with the overall Air defence arrangements. Since it was not possible to acquire new radars within the available time frame, available radars were suitably deployed to cover important VAs and VPs and to double bank with the static high power radars. The Mig 21s and Gnats were earmarked for air defence tasks and placed under various Air Defence Direction Centres (ADDCs). Surface-to-air missile were redeployed to provide cover to forward airfields.

To achieve atleast a semblance of low level cover, Visual Observation Posts and Flights (MOPs and MOUs) were formed and deployed just inside the border. These were integrated in the Air Defence Network and the base Air Defence Organisation by HF communications. These VOPs (MOPs) became functional just a few days before the conflict. Even with this last minute induction, they did prove their worth wherever they were intelligently integrated with the Base Air Defence Centres. The only constraints were their thinly spread out locations and reliable HF equipment.

A word here regarding the AD guns. Immediately on declaration of Exercise "Cactus Lily" a mix of L-60 and L-70 guns were allotted to all major airfields, radar stations and other important installations of the Air Force. In the intervening period, the gun crew were well trained on aircraft recognition, airfield procedures and procedures of the New Base Air Defence Organisation, and were expected to give a good account of themselves. The shock, however, both to the affected airforce commanders and the AD Gunners themselves, was when on declaration of war on 3 December, plan 'A' was executed and all the regular AD Artillery units were moved to army's forward formations, leaving the airfields to the mercy of Territorial AD regiments, who were still being embodied. Had Pakistan persisted in pressing home their counter-air operations against our airfields, this late switchover could have been rather telling.

There is a lesson here. Airfields conduct continuous aircraft operations, and therefore, there are more chances of mistakes in identification. Also,

their static location being well known to the enemy, attacks can be carried out from extremely low altitudes, with all the elements of surprise. Well trained, integrated AD troops are, therefore, a necessity whether in olive green or Air Force uniforms. In keeping with our present trend of self sufficiency for each service, the Air Force may thus have a case for its own Air Force AD regiments.

OFFENSIVE AIR SUPPORT

For the all important offensive Air Support operations, special efforts were made to drastically minimise the time lag between the demand and the appearance of close support aircraft overhead by devolution of power and allocation of CAS aircraft to lower levels, i.e. Corp HQs and in some cases even to Div HQs. At the Army Command level, Advance HQs under Air Commodores were established to represent the respective Air Force Commands. Under them, Tactical Air Centres, commanded by Group Captains were established at the Corps HQ level. Each TAC had a number of forward Air controllers (FACs) with their Air Contact Teams (ACT) which moved with the advancing troops and were responsible to guide the CAS aircraft to the targets indicated by the Army. The TACs were allotted specific air effort from nearby airfields and had full freedom to use them as required by the Corps HQ. This helped to reduce the time lag between the initiation of demands and aircraft overhead to about 1 - 1½ hrs. One other innovation was allotment of dedicated air effort directly in support of 1 Armd Div which was meant to spearhead a major offensive should any materialise. The Division located at Kot Kapura was to be supported by aircraft from Halwara. Direct communications had been established, bypassing the normal air support Network (ASSU). Unfortunately the scheme could not be tested as the Division was never committed to war.

RECONNAISSANCE

For FR/PR a system was developed wherein the stations with Photorece aircraft were equipped and trained to develop the films immediately on return of PR aircraft. These were then transported by air or by road either to the indicated Army formation or through Command HQ to AHQ. It must be confessed here that the Air Force could not provide the necessary PR before commencement of hostilities because of likely international complications in flying over Pakistan territory. The requirement was made up in the first few days of the War. At the tactical level, however, the procedure proved too time-consuming and cumbersome. There was also a shortage of night-photography equipment.

COUNTER AIR OPERATIONS

The counter air operations were split in two parts - Those by the fighter-bombers under Western Air Command and those by Canberras and modified transport aircraft under Central Air Command. Operations by the latter were planned at Air HQ and the frontline command, WAC, was merely informed to provide a safe transit. Such arrangements are justified for genuinely strategic operations. However, most of these operations were of tactical nature, in direct support of front-line operations. It is, therefore, debatable whether such dual control was called for in such a purely tactical situation.

For the counter air tasks, after much thought, Air HQ decided as the following targetting priorities.

- (a) PAF airfields, radars and other support installations.
- (b) Energy targets like major fuel dumps.
- (c) Transportation system, i.e. roads and railways, specially the lines of supply to the Front.
- (d) Support to the Navy
- (e) Other tasks.

NAVAL SUPPORT

For naval operations, Maritime operation rooms were set up at each Naval command to coordinate the requirements. In the event, however, they were hardly employed. Even the Navy's attack on Karachi was not known to the Air Force and it was an extremely fortunate coincidence that the IAF attacked Karachi just before the appearance of Naval missile boats, inadvertently softening the target, so to speak.

PASSIVE AIR DEFENCE

Airfield camouflage had improved since special attention had been given to adopt agricultural field patterns right upto the runways, merging them with the surrounding country side. However, with the induction of additional aircraft and missile squadrons at forward locations, it became apparent that a number of these stations were ill-equipped to house, deploy and maintain the new inductions. Hurried innovative measures, therefore, had to be taken - including camouflague and hiding Combat aircraft under cover of trees. Even sand bags were in short supply.

PAF PREPARATIONS

While the IAF was thus preparing for December 1971 operations, it would be interesting to consider the preparations across the border. PAF had chosen the following objectives in terms of their priority :

- (a) The foremost was the close air support for the major offensive to be launched by Gen Tikka Khan. This never happened, since Tikka remained "frozen".
- (b) Air Defence of PAF air fields and installations, and achievement of favourable air situation over the ground battle areas.
- (c) Counter air operations against IAF airfields and installations.
- (d) Air support to Pak Navy. PAF had repeatedly warned Pak Navy that the effort would be extremely limited and would be given only if adequate notice was given. In the event, this never materialised and PAF got blamed for not protecting Karachi against the IAF and Indian Navy attacks.

ORBAT

By 3 December both sides were poised and itching for the word 'go'. The IAF had a total of 32 Combat Squadrons of which 17 were with WAC, 6 were with Central Air Command and 9 were deployed in the East. According to PAF, however, IAF had nearly 44 combat sqns of which 10 were in the East and rest 34 in the West. For themselves they claimed to have only 10½ Sqns in the West.

In the overall analysis, IAF (Like Indian Army on ground) had numerical superiority but the forces were spread rather thinly over 14 airfields perhaps because of our over-estimation of Pak strength.

THE WAR

On December 1, Yahya took the decision to launch an all out war on 3 December with pre-emptive air strikes and tentative army probes to be followed by the much awaited massive offensive by Gen Tikka Khan. Formal declaration was made at 1630 hrs on 3 December, and within half an hour PAF was on its way to strike four IAF bases - Srinagar, Avantipur, Pathankot and Amritsar. Halwara was also on the hit list but PAF instead attacked a closeby ALG at Faridkot. This was either because Halwara was difficult to locate or because a dusk CAP of 2 Gnats happened to be airborne at that time. More strikes followed at night by B-57s against

Ambala, Agra, Halwara, Amritsar, Pathankot, Srinagar, Sirsa, Adampur, Nal, Jodhpur and Jamnagar. These strikes were carried out with a little more determination than the earlier pre-emptive strikes by the fighter bombers. However the damage inflicted was peripheral. Runways were cratered at a few airfields but promptly repaired, without hampering IAF's operations. IAF launched its retaliation with about 24 Canberras, one AN 12 and six Sukhoi/Mig sorties, within hours of the first PAF strike. Targets were PAF airfields at Rafiqi, Sargodha, Mianwali, Rasalewala, Murid, Chander and Masrur. These strikes were followed up by waves of counter-air strikes in the next two days by Sukhois and Hunters. These operations continued till 6/7 December and fair amount of damage was caused to PAF runways and aircraft on ground. PAF admitted major damage at Sargodha, Chander and Masrur. Thereafter the counter air operations generally declined. In the first two days i.e. 4 and 5 December, about 218 counter air sorties were flown in the Western Sector. Their effect became obvious when PAF counter air effort not just slackened but more or less ceased after the 3rd day. Total counter-air sorties flown against Pak military installations and energy targets in the Western Sector amounted to 437 or 9.5% of the total effort in the West.

The PAF, however, has claimed that their counter air operations continued right till the end, since Tikka's offensive did not materialise, thus keeping IAF under constant pressure. We, however, know what actually happened. Most of these sorties never materialised and in any case never pressed home, the PAF aircraft occasionally dropping the load in the fields and on innocent towns. Where they could not avoid coming on IAF airfields - merely because of the proximity (e.g. - Amritsar and Pathankot), stores were anyhow delivered in great hurry, causing no damage. In all, the PAF fighter bombers carried out about 100 sorties against our airfields and radars.

AIR DEFENCE

In the preparatory period techniques had been perfected to reduce the reaction period for getting the interceptors airborne in about 1 mt to 1½ mts. For base protection, CAP Controller techniques had been developed and a system of local AD control from the Base Air Defence centres had been practised. In keeping with PAF counter air strikes, IAF's air defence effort was also maximum in the first two days, amounting to 185 sorties. Most of these were devoted to combat air patrols (CAP) over the airfields and over VAs/VPs, based on radar warnings or as dawn/dusk patrols. Results were rather disproportionate because, as said earlier, PAF never really pressed home their attacks. Even then, our tally would have been substantial if we had low looking radars and fighters with low looking air

borne interception radars and low level missiles. It is rather intriguing that though dusk CAPs were more or less mandatory during the "wait and watch" period, when the PAF actually struck at the four airfields, no CAPs were air borne. In later part of the operations, air defence CAPs were also flown to give cover to our ground attack aircraft in the tactical area.

Air Defence sorties in Western Sector totalled 2074 i.e. about 46%. Considering that the PAF aircraft shot down in air combats totalled not more than 12 in the Western Sector, this effort would look rather infructuous but it was necessary because of lack of radar cover. Also the fact that we lost only 2 aircraft on ground as against PAF's loss of 18 on ground in the Western Sector, proves the effectiveness of our air defence versus that of PAF.

During the last 2/3 days, fighter sweep sorties were flown deep in Pakistan territory, well visible to their radars as a challenge to force some response from PAF. None came - by day or by night.

SUPPORT OF THE ARMY

Dedicated air effort had been allotted for this very important role and except for counter air operations in the first two days, it was kept exclusive. Being dependent on Army's requirements, the effort built up gradually. What was important to note was that in most cases the effort was asked for after the ground action had started. Air Force response was fairly quick and did produce the desired results of stemming enemy's advance or breaking his resistance. However, real effectiveness of air power lies in its employment before i.e. in the preparatory, softening-up stage, paving the way for advance by the ground forces and ensuring air superiority over the area. This requires not just joint but integrated planning.

In the absence of such planned employment, the demands for air support came rather sporadically but always in urgency. On the first day, for instance only 23 sorties were demanded which rose to 81 the next day. Even this effort was well below what was catered for. Perhaps a better way of recounting the ground support effort would be to examine it for each major land battle. Simultaneously with the pre-emptive air raids, PAK Army had started its probing operations at Poonch, Chhamb, DBN, Lahore/Kasur Sector, Hussainiwalla, Suleimanki and further South West near Ramgarh-Longewala. Some of these probes developed into major battles.

CHHAMB

In Chhamb area, it appears that the role for 10 Division was changed at the last minute from offensive to defensive. The necessary redeployment was still in progress, when, true to their obsession of cutting off Kashmir valley, Pak Army (Pak 23 Division) launched its offensive. PAF was employed right from the beginning and flew nearly 117 sorties in support. In the face of this mounting pressure, on 6 December we had to withdraw to east of the Tawi. In the later stages of this battle, air support was demanded and given in full. In the next three days, Air Force flew (20+28+30) 78 sorties (135 were available). Yet a report reached at the Chiefs level that air support was lacking. Whatever be the reality, the fact stands that as a result of air action which included night bombing, no further advance was made by Pakistanis. Incidentally the PAF which was active initially, shied away once IAF established air superiority.

POONCH

Simultaneously with the Chhamb thrust, Pak 12 Division opened a probing attack in Poonch area to cut off Indian territory south of Peer Panjal. Air support was called for but because of the terrain, slower Vampires and Harvards had to be employed. These obsolete aircraft could not achieve much. Air Chief Marshal Lal claims that the real demoralising punch was provided by an AN-12 modified for bombing which plastered the area at night.

SHAKARGARH

The only major offensive of Western Command was launched by 1 Corps against a Pakistani salient near Shakargarh village, south of Jammu. This operation was planned in spite of Army HQ directive against any offensive, mainly to relieve pressure up North. This action was of a set-piece, since Pakistan expected it. Pak 2 Corps (8 and 15 Divisions) was well prepared to receive the Indians. Our offensive opened on 5 December with 54 Division pressing from North, 39 Division from East, 36 Division from South. All the three met with extensive minefields and well prepared Pak defences. Predictably the advance was slow and casualties high. Matters were made worse by PAF which flew a total of 306 sorties in close air support and interdiction. From our side, air effort for 1 Corps was to be provided through 8 TAC. Coming from its peace location at Mathura, the air support organisation including the communication network, was not upto the mark. Hence, although considerable air effort was earmarked for this TAC, with more available if required, initially, hardly any air effort was called for, surrendering it back to Advance HQ. It was only in later stages

that the air was called in. IAF quickly established air superiority in the area and mounted massive effort with Sukhois from Adampur, Amritsar and Halwara. However, the type of operations and the weapons demanded were not quite the right one (e.g. bombing to explode minefields). So perhaps the results were not commensurate, but the presence of IAF did prevent PAF from any further interference.

KASUR - HUSSAINIWALA

There are three critical bridges along the Indo Pak border. The one on river Ravi at DBN was blown up by our troops. The second was on the Sutlej - the Hussainiwala bridge near Ferozepur which provided direct access to the Grand Trunk Road straight to Ambala and beyond. 7 Division was to guard this route. The bridge is in Indian territory with a small enclave west of the river. Just before the hostilities, a battalion with the necessary ordnance stocks was positioned in this enclave. The bridge was heavily guarded, but was also prepared for demolition in an emergency. This was known to the enemy. On the evening of 3 December, Pak 106 Brigade Group launched an attack to eliminate this enclave and to capture the bridge. To support our troops, one squadron of tanks was rushed across the bridge. Unfortunately, their fate was sealed when enemy shelling set off the bridge demolition, stranding the battalion on the west bank of Sutlej. The Air Force was called in on 4 December afternoon. Over 24 sorties were flown to prevent Pakistani armour and aircraft from mauling the battalion, which managed to pull back across the river on 4th night.

FAZILKA - SULEIMANKE

The third critical bridge was across the Sutlej at Suleimanke Headworks in Fazilka area. This bridge and an enclave east of the river falls within Pakistan - unlike at Hussainiwala. This provided an excellent ingress route for a Pak offensive. Such an attempt was therefore anticipated by the Army and Indian position around the Pak enclave had been well prepared and fortified. As expected, Pak 105 Brigade Group launched its offensive against Indian positions on 4 December and captured the bridge over the Subana drain. A determined stand was made by the Army to stem further enemy advance and to recapture the lost positions. Called in at this stage, the Air Force did two things - close support with Sukhois from Halwara and Mysteres from Sirsa, and intensive interdiction behind enemy lines along the routes leading to Suleimanke, to stop re-inforcements. In fact an all-out offensive was declared on all road and rail movements from Montgomery upwards, flying nearly 300 missions. This played an important part in stemming Pak advance and any likelihood of major Pak break-through along this axis. Like all other Pak offensive actions, their Air Force was brought

in at a very early stage, and flew nearly 51 mission before the IAF stepped in. Thereafter, as on cue, PAF disappeared from the scene.

LONGEWALA

The most spectacular achievement of the Air Force was at Longewala in Rajasthan, north west of Jaisalmer. This operation also proved beyond doubt the much quoted advantages of air power, namely quick reaction time, concentration of force, flexibility and lethality. This battle was fought with armour on one side and Air on the other.

In the preparatory stage, Southern Command, which was responsible for Rajasthan-Gujarat Sector, had planned some probing thrusts North of Jaisalmer towards Rahimyar Khan. Four Hunters from Jamnagar had been positioned to support the army and deal with Pak intrusions if any. On 4 December night, while 12 Division was preparing for the Northward drive, a Squadron of tanks from PAK 18 Division crossed Indian border from the West and made dash for Ghotaru-Ramgarh Road, bypassing a small post at Longewala. The noise of Pak tanks was heard and reported by the company commander at Longewala but HQ 12 Division doubted the report. Pak armour halted short of Ramgarh and turned back, apparently to await a join-up with the following troops. This led to another warning from the Longewala post. Next morning Air Force was brought in to investigate. A recce by two Hunters revealed the incursion by Pak T-59 tanks, which were engaged by the Hunters with guns and R/Ps. A succession of two aircraft missions followed to seek out and destroy Pak tanks and troops in the area. The task was left entirely to the Air Force without any interference by the PAF. The four Hunters from Jaisalmer launched 17 sorties and destroyed or damaged all the 40 odd tanks. PAF have no apologies for this debacle because PAF claim that they had warned Pak Army that advance notice was imperative to activate Jacobabad airfield for air cover in this area.

NAYA CHOR

While the 12 Division's proposed thrust to Rahimyar Khan stalled, Southern Command launched a thrust through Garda towards Naya Chor. Air support was allotted from Uttarlai but, unfortunately, was never fully utilised. From the Pak side, on the other hand, PAF claims to have launched its second largest effort after Shakargarh, flying 150 sorties and claiming it to be the decisive factor in halting Indian advance - a mini reversal of Longewala.

OTHER TASKS

As per plan, once the opening barrage of counter air strikes against PAF airfields and installation was accomplished, other targets were engaged

according to the targetting priorities. These were the energy targets such as Attock oil refinery. SUI gas plant, oil storage tanks at Karachi etc. Considerable damage was done to these installations, which took nearly a year to repair after the hostilities. In any case these attacks certainly inhibited PAK war activities. Next came attacks on transportation - trains, marshalling yards, bridges, roads etc., right from Hyderabad upwards to Lahore and beyond. Pakistan military writers admit the direct effect these had on Pak's supply and reinforcements to their forward troops.

Good work was done by No 106 Squadron and most of the important target areas were covered. Tactical recce was a different matter. Only the Sukhois were equipped to carry a single camera under the wing. Even to photograph an area like the Changa Manga forest, three aircraft had to fly line abreast at 12,000 ft. We also loaded night-photography equipment.

INNOVATIONS

There were a few innovations, which taken to logical conclusion, could have given good dividends. A "Tripod" bomb was devised, which when dropped at runways, traxy tracks or tarmac, would spread steel tripods firmly sticking them to the surface, making them unfit for aircraft operation till bulldozed off. Two bombs were dropped, I think on Chunder and, according to an interview given by Air Marshal Rahim Khan, did manage to puncture tyres of an aircraft on take off run. Pak C-in-C had wondered why more such bombs were not dropped. Base Air Defence Organisation against low level raids was another innovation which was accepted rather late to be properly practised and be effective.

THE OTHER SIDE

Before summing up, we may pause to see what PAF had to say about this war. Firstly, PAF firmly believed that victory was PAF's in the 1965 conflict and that too was due to the higher skills of their pilots. It is, therefore, amusing how this belief gradually declined into a hollow bravado and finally into outright demoralisation. Immediately after the '71 war, most of Pak military writers have blamed PAF for its total failure. This led to Mr Bhutto announcing the retirement of not only the PAF C-in-C but also many other PAF officers by name, in his speech to the nation on taking over from Yahya. Actually, however, PAF did not do so badly as will be evident from the loss/achievement statistics. The problem was that Rahim Khan was considered to be a pliable, weak C-in-C who was brought in by Yahya to replace Air Marshal Nur Khan. During the later days of Ayub and in Yahya's reign the military was increasingly dragged into politics and becoming corrupt. There was the genuine feeling among junior PAF officers that nobody was bothered about the PAF and about its systematic build

up and modernisation. Even when hostilities became imminent no serious planning was done at the top. Major decisions were left to the President's coterie, which excluded the Navy and Air Force C-in-Cs. This led to a diffident, "wait-and-watch" attitude in PAF, as was evident from PAF's half hearted performance throughout the war.

Like the IAF, PAF had also concluded that their most important task was offensive support to the Army. In the waiting period, only those tasks which contributed to this aim, e.g. air defence and immobilising of the IAF, were to be undertaken. PAF seems to have followed these priorities but without any zeal. One wonders what their performance would have been if Tikka had indeed gone on the offensive.

RESULT AND ANALYSIS

I think the best way is to tabulate the results and let them speak for themselves. However, results of any battle unfortunately depend on statistics compiled after the war. Many times the real lessons are forgotten or lost sight of. Official archives are not written or if so, are held as top secret. PAF indeed did bring out its history but changed its contents every time to suit the ruling regime. The latest was published in 87 and is an apologia for its indifferent performance in 1971. From IAF side there is only one authentic source-ACM Lal's book. Unfortunately even there, a slight discrepancy exists from the information released by AHQ earlier.

There is no doubt that IAF had a significant superiority - both quantitative and qualitative. This helped in the East in annihilating PAF elements based there. In the West, however, the results are not so astounding, mainly because both sides seemed to have been waiting for their own ground offensives. Also in the case of IAF, nearly 4 Squadrons were kept exclusively for air defence of hinterland. The effective Squadrons left for the Combat area were thus about 16 Vs PAF's 13-not such a big difference. Secondly IAF had to disperse these Squadrons at much larger number of airfields - 14 in the West as against PAF's 6-7. While this did help in cutting down losses on the ground, it did thin out the force. A point to note is the inordinate large effort devoted to the Air Defence i.e. 2074 sorties by the IAF against a total of 290 counter-air sorties launched by PAF. I have already mentioned the reasons, i.e. lack of continuous radar cover, specially at low levels. Hence wasteful CAPs had to be mounted as a routine. PAF also seemed to have had the same problem.

The next largest chunk on both sides, went to offensive air support. Given the priorities, this is understandable. The point to note is that, both quantity-wise and percentage wise, IAF devoted much more than PAF in this role.

The percentages for counter air are remarkably close on both sides (9.0 Vs 9.4). The only difference is that IAF flew larger number of sorties against smaller number of targets - hence more saturation and consequent devastation.

The overall combat sorties rate per day for IAF was more than twice that of PAF. Both sides have indicated that much more could have been put in, if the demand arose.

GAINS & LOSSES

With all those sorties, what did we achieve? It is always difficult to obtain accurate figures of losses/damage inflicted on the enemy. While aircraft losses are comparatively easier to determine, damage to other targets on ground can only be checked by eye witnesses, gun cameras and occasionally by tactical photo recce. As regards PAF aircraft losses, various figures have been quoted which fluctuate between 15 to 82. PAF's overall attrition rate was 2.47, unbearably high to be sustained for long. If aircraft destroyed on ground are not taken into account, the remaining rate of 1.12 for 100 sorties, is still quite high, considering that PAF aircraft never really stood back to fight.

In all the IAF lost 56 combat aircraft, of which 21 fell to enemy fighters and 35 to Air Defence artillery. Largest number (29) was lost in offensive support operation, majority to guns and small arms fire. One of the reasons for this was wrong employment directly attributable to lack of understanding of air tactics. Missions like 'search and destroy' when applied to seek out entrenched/camouflaged tanks, guns and troops, not only become futile but also expose the aircraft to all kinds of random fire from ground. Secondly, wrong tactics. In peace time training, undue stress is laid on marksmanship, leading to adaptation of tactics like shallow or medium dives for guns and RPs. We learnt after bitter experience that steep dives, specially where there was no fear of enemy interceptors or SAMs, were safer in close support operations. Curiously PAF came to the same conclusion and went further to abandon Guns R/P combination altogether, in favour of Guns/Bombs.

A word on counter air. Many losses in these operations were not exactly during the actual attacks on Pak VAs & VPs, but during transit and from PAF planes, expertly directed by the low level organisation, enabling pursuit attacks. IAF's overall attrition rate was 0.86, well within sustainable limit of 1.0 and compares well with Israel's rate of 1.1 in the Yom Kippur War.

CONCLUSION

I would like to refrain from expounding much on the lessons learnt since the subject is specific to Air ops in Western front, where

action was restricted to stand-off operations. Some facts, however, do stand out.

Firstly, the conflict in the West, was of a set piece as said earlier. Both sides had guessed correctly each others intentions. Perhaps, a little boldness or innovation from one side could have paid off handsome dividends. Both Air Forces' resolve to give top priority to ground support was laudable but without a corresponding major ground offensive, only helped to tie down the aircraft. After the first four days, many of our aircraft were largely idle. With prior knowledge of Army's plans, these aircraft could have been used to continue counter air operations to cause further damage to PAF.

PAF showed low morale, atleast very little enthusiasm, right from the pre-emptive raids. This could be attributed to Pak politicians' pursuit of wrong cause, the secondary position given to the PAF and its weak leadership which led to lack of motivation.

On our side, excellent inter service cooperation existed but there was very little coordination. There was much praise and 'Shabashi' for each other, but little understanding of each others capabilities and even lesser inclination to integrate Air in Army's operational plans. Air Force was invariably called in after the action started, but never for pre-emptive, softening up strike or diversionary tactics. The unnecessary episode in the Chhamb operation was unfortunate. Air is a powerful weapon not only for physical destruction of enemy war machine but even more so, as potent weapon against enemy's morale. Air Force should be considered as a partner right from the evolution of war plans, rather than as a bonus.

To this extent more stress needs to be laid on inter-service interaction and training exercises. Junior commanders need to be made aware of capabilities and limitations of each service and of inter-service procedures.

Inadequacy and inefficiency of central intelligence agencies has been mentioned by most of the writers on 1971 conflict. Even a major piece of information like strength of Pak forces in the East was not available, leading to significant changes in the Army's plans. There was also the search for Pakistan's second reserve Armd Division of Pak Army. It was reported at various times to be between Montgomery, Changa-Manga forest to Sialkot. Even whether it was 1 or 6 Division was being debated.

So far as Air Force plans were concerned, full latitude was given to Commands to formulate their own plans and there was no instance of any major interference from above. The problem in the West, however, was

that WAC had no advance knowledge of Western Command plans, except that it was to be a holding operation.

One important aspect that was missing was a general briefing to the Base and TAC commanders, who were given piecemeal information. There was also no systematic information gathering and analysis of events and experience of the combat units, to assess efficacy of the tactical plans and the tactics adopted. There was no daily dissemination of war situation - a sitrep, so to say, to Air Force Commanders in the field. Often, therefore, we did not know what was happening at even the neighbouring stations, nor could benefit from their experiences and innovations.

Induction of new Weapon systems has to be a continuous, on going process in peace time. It cannot be done in haste when hostilities become evident. We had known our low-level air defence deficiencies since 1965 conflict, but the 1971 war still found us with the same problems.

Interestingly, the one predominant theme in all PAK books on 1971 war is the lack of low level cover. This explains PAF's desperate efforts to acquire AWACS capability - the only answer to full low level cover.

Figures of aircraft that fell to ground fire from both sides highlight the effectiveness of AD artillery and small arms fire against low flying aircraft. This would become worse in future with induction of SAMs. For the Air Force, therefore, dedicated AD artillery units are a necessity if last minute surprises are to be avoided.

The preparatory period should be utilised in stocking up the inventory with right type of spares and ordnance stores and in devising tactics relevant to the obtaining circumstances, rather than running around to shop for new systems. For instance, Sukhois could carry S-24, R/Ps which had a tremendous wallop and which could penetrate concrete bunkers/aircraft shelters. Yet these arrived on the last-but-one day of war. The IR flares for Sukhois, to ward off air to air missiles, also did not arrive till late. We lost at least three aircraft to PAF's Sidewinder missiles. An example of wrong tactics, unwise choice of rockets and shallow glide bombing against entrenched targets.

Our weakness in PR has already been mentioned. While this was so, there was also an instance of an unfair demand for PR to locate the mysterious Pak reserve Armd Div.

One glaring weakness in IAFs plans was total lack of Electronic Warfare (EW) capability. PAF had up their sleeve a fully modified B-57 which, fortunately, was damaged early in a raid on MASRUR. PAF did,

however, use other Electronic Counter Measures. In the second week of war, one night suddenly our radar screens were dotted with large blips. Three of our stations shot off a total of 9 missiles at these spurious blips. Aircraft were also scrambled and in the ensuing excitement, there was a sad instance of the No 1 being guided by our radar to intercept and shoot down his own No 2.

The conflict is now two decades old. The specific lessons have no relevance now, since the circumstances and weapons have changed and the necessary corrective measures have been hopefully taken. However, long term measures like accurate and relevant intelligence, pragmatic planning, timely replacement or modernisation of weapon systems and realistic training, continue to be relevant and must be adopted at the earliest. Next time the enemy may not be as confused, weak-kneed and co-operative.

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Battle of Chhamb : Indo-Pak War 1971*

LT GEN R K JASBIR SINGH PVSMA (RETD)

"It is much better to have several bodies of reserves, than to extend your front too much" - VEGETIUS.

INTRODUCTION

The Battle of Chhamb, 1971, has been discussed with the same ferocity as it was fought. No other action has generated such controversy. It has been dissected and analysed like no other action fought by India since independence. As a consequence there has been the inevitable misconception, misinformation and (regrettably) disinformation about the way it was fought. There has been much criticism but this has been softened by those, who understood the compulsions under which it was fought.

Due to the lapse of 18 years a clearer perspective is now possible. Availability of material, particularly from Pakistan, has helped in getting a more lucid picture of the battle. In my talk I shall try to not only give you my version of the battle, but also attempt to give you the rationale behind certain decisions taken before and during the fighting, which later became controversial.

It is not the intention to find scapegoats. The intention is to learn from the mistakes of others. In war there are no runners-up. There are either the winners or the losers. If Chhamb was lost then all who took part in its defence are guilty, some more and some less. If an impression is created that certain unpalatable decisions were thrust on Commander 191 Inf Bde by his superiors then it is worth remembering what Napoleon had to say : "Every General-in-Chief who executes a plan, which he finds bad, is guilty. He should represent and insist that the plan be changed. If he is unable to do so, he must resign rather than be an instrument for the ruin of his troops".

It is necessary to thoroughly understand the military importance of the Chhamb-Jaurian sector, which has been fought over twice in the space of six years, as well as the terrain, before discussing the sequence of events of the 1971 Battle of Chhamb. Worthwhile lessons can only be drawn after an in depth analysis of the battle. This is not possible in a short talk of this nature.

TOPOGRAPHY

The Chhamb-Jaurian Sector lies between the outer hills of Kashmir

* Text of a talk given to the members of the USI on 28 December 1989.

and the plains of the Punjab. It is shaped like a funnel -- the area west of Manawar Tawi (referred to as the Tawi here) forming the broad base and the area around Akhnur, its apex. The narrowing of the funnel begins along the line Dhonchak-Troti-Kalit which lies between the Chenab River and the 1727 meter high, Tam Ka Tilla feature.

The ground is interspersed with a number of nullahs, which progressively slope southwards. The Chenab is a major obstacle. It can be crossed by ferries or by the Class-18 Bridge at Akhnur, which is capable of taking light tanks and armoured cars. The Manawar Tawi flows from the north to south and ultimately joins the Chenab a mile south of the International Border (IB). The Chhamb sector lies to the west of Manawar Tawi, which is fordable at a number of places during the dry season - the main crossings being at Mandiala, Chhamb, Darh and Raipur. The concrete bridge at Chhamb crossing was completed just prior to the outbreak of hostilities. The area south of Palanwala-Khaur opposite the Nadala Salient (south of the IB) is mostly waterlogged, due to the emptying of the waters of the New Partap Canal in this area.

Employment of armour is generally restricted to squadron/troop level, except in the south west portion of Chhamb sector, where upto a regiment can be employed. The area north of Chhamb and the New Partap Canal restricts the employment of armour, as it merges into hilly terrain. Armour can be used only along existing tracks in the area opposite the Nadala Salient.

There are only two main roads in the sector : Road Akhnur-Jaurian-Khaur-Palanwala-Chhamb and Road Akhnur-Kalith-Chhamb, in the North. Besides these a number of minor roads and tracks existed on both sides of the Tawi, which could be used for most of the year.

Manawar, Jhanda, Pt 994 (popularly known as Pt 303), Phagla Ridge, Gurha, Mandiala Heights, Buchoe Mandi, Tam Ka Tilla, Troti and Fatwal Ridge were some of the more important features both sides of the Tawi. The area between the Chenab and its offshoot, the Chandra Bhaga, south of the IB, was known as the "Dagger" till Maj Gen Zoru Bakshi, GOC 26 Inf Div, renamed it the "Chicken's Neck".

THE IMPORTANCE OF THE CHHAMB JAURIAN SECTOR

The Chhamb-Jaurian Sector is the southern most bulge into Pakistan occupied Kashmir. It is the only open, plain and tankable country along the Cease Fire Line (CFL)/Line of Actual Control (LAC), besides Jhangar-Naushara. Because the IB and CFL meet in this sector Pakistan enjoys the tactical advantage of being able to pick and choose either of the

borders for an offensive. In the context of the Karachi Agreement of 1949, which forbids induction of additional troops, construction or strengthening of defences in J & K, this gives Pakistan not only the whip hand, but confers enormous flexibility, to them in a conflict. Conversely, the defenders of Chhamb (ie area of West of Tawi) are faced with the prospect of having to defend two fronts. In offensive operations, Pakistan has the ability of not only supporting an assault across the CFL from positions south of the IB, and thus ensuring the localising of the conflict to "disputed territory", but of being able to enlarge the conflict by simultaneous (or in tandem) assaults across the IB.

An offensive launched from Chhamb has attractive prospects for both sides. From the Indian viewpoint a direct threat is posed to the sensitive 180 miles road and rail link between Rawalpindi to Lahore and to the Marala Headworks, from this direction. The Pakistanis, on the other hand, by attacking Chhamb not only remove this threat, but also in turn threaten Akhnur, the capture of which would not only sever the Rajauri-Punch lines of communication, but pose a direct threat to Jammu-Pathankot from the west.

It is, therefore, inexplicable that not much military significance has been attached to this sector. In 1948, the capture of this area was of secondary importance - it was a subsidiary operation to the main thrust on the Naushara-Kotli-Punch axis. Having established a bridgehead across the Tawi by securing the line of the nala running southwards from Chakla-Dewa to Moel Burejal, the Indians were more than content to rest on their laurels. It was considered inexpedient to clear the 'raiders' from the rest of the area towards Bhimbar on the specious premise that a further advance would increase the vulnerability of the L of C. By abruptly halting the operations along ill defined features, with no natural strength, the area west of Tawi became virtually defenceless.

THE BATTLE OF CHHAMB - 1965

Op 'Grand Slam' which was a corollary to Op 'Gibraltar; the massive infiltration operation in J & K, was launched by Pakistan with the aim of gaining maximum strategic advantage with least effort. The choice of the Chhamb-Jaurian sector was logical and inevitable. Having lulled the Indians into thinking that operations in this sector would be limited to infiltration, the Pakistanis launched a full scale offensive with the object of capturing Akhnur. 191 (Indep) Inf Bde deployed in a counter-infiltration role west of Tawi, could offer no co-ordinated resistance, and was forced to withdraw within hours to Akhnur. Akhnur was saved because the Pakistanis failed to maintain the momentum of the offensive after the establishment of a

bridge-head across the Manawar Tawi. This fatal pause enabled the Indians to reinforce the sector, and to effectively halt the enemy west of Fatwal Ridge. The offensive by 1 Corps in the adjacent Sialkot sector on 6 Sep 65 put paid to any hopes the Pakistanis may have entertained of capturing Akhnur.

The loss of Chhamb-Jaurian in 1965, can be attributed primarily to a faulty appreciation of Pakistani intentions. The down grading of the sector to a low priority (at that time it was assessed that the main Pakistani thrust would be towards Naushera) and the hasty deployment of the brigade to deny ingress routes to infiltrators, had sealed the fate of the troops even before the first shot was fired. The vastness of the sector (some 48 by 32 km extending from Kalidhar to the Chandra Bhaga River) was clearly beyond the capability of a single brigade. By holding positions west of Tawi, without adequately strengthening depth positions, particularly along the eastern banks of Manawar Tawi, the brigade had been reduced to a police force guarding border outposts (BOPs). The blame was put on the intelligence agencies, who it was said, had failed to interpret enemy strengths and intentions opposite Chhamb-Jaurian. Not much criticism has, however, been levelled at higher commanders for their failure to correctly assess the inter se importance of the Chhamb-Jaurian sector.

THE BATTLE OF CHHAMB - 1971

THREAT ASSESSMENT

After the Chhamb Battle of 1965, a reappraisal was made regarding the threats to Chhamb-Kalidhar sectors. As a consequence, it was assessed that 12 Inf Div would no longer operate in the sector. The likely Pakistan threat would emanate from Kharian, where the newly raised I Corps was located. 6 Armoured Division with 9 Infantry Division and supported by 1 Corps artillery Brigade would most probably be employed against the plains sector. The exact quantum of armour could not be assessed. At the worst the entire 6 Armd Div might be used. It was felt that Pakistan would probably use one or two AK Bdes ex 23 Inf Div, against the hill sector. This threat assessment was valid till early 1971. With the escalation of fighting in East Bengal, and the induction of formations including 9 Inf Div from West Pakistan to that sector, a diminishing of Pakistan capabilities in Chhamb sector was perceived.

By mid Oct 71, at a briefing held at my HQ, despite evidence to the contrary (troops in contact and intelligence sources had identified 20 Inf Bde and 4 AK Bde, approximately two regiments of armour and elements of a heavy artillery regiment besides integrated artillery regiments of the

two brigades opposite the sector) GOC, 15 Corps, declared that only one infantry brigade (20 Inf Bde), its affiliated artillery regiment and a squadron of Sherman tanks need be expected in the Chhamb-Jaurian Sector. Later, GOC 10 Inf Div echoed this assessment, adding that the only formation (the newly raised 17 Inf Div located at Kharia) had been committed elsewhere and that according to higher intelligence, including R & AW the main Pakistan effort would be made against Punch sector. It was decided that preparations for the offensive by 10 Inf Div would continue. (At a subsequent planning conference at Corps HQ, GOC 10 Inf Div revised his views about dispositions of Pakistan troops opposite Chhamb. However, he was accused of getting cold feet and wanting to call off the offensive). The actual Pakistani forces employed against Chhamb are given in Appendix A.

OWN PLANS

After 1965, 191 Inf Bde had come under 10 Inf Div. The hill sector was made the responsibility of 28 Inf Bde, with its HQ located at Pathankot along with HQ 10 Inf Div. The third brigade, 52 Inf Bde, was located at Dalhousie. The plan to deploy 191 Inf Bde along line Tam ka Tilla-Kalit-Troti-Dhon Chak-Bakor was well conceived. It was a tacit admission of the fact that the defence of the area west of Tawi was beyond the capability of an infantry brigade, if it was to fulfil its main task of protecting the approaches to Akhnur. The defence plan envisaged the denial of the area ahead of the main defences for 48 hours, by covering troops based on 5 Sikh less a company with A Sqn 9 Horse (Papa Force) west of Tawi, and 9 Horse less two squadrons with a company each from 4/1 GR and 5 Assam (Quebec Force) in area between Manawar Tawi and Chenab opposite the Nadala salient. One of the tasks given to 52 Inf Bde was to reinforce the sector. Since the Chhamb sector never merited high priority 52 Inf Bde did not take this task seriously.

In early 1971, the defence plans were, for all intents and purposes, put in cold storage. The buzz word was offence. GOC 10 Inf Div had managed to sell one of the most impracticable and audacious offensive plans to higher commanders. GOC-in-C, Western Command, however, remained sceptical of their viability, even though he let the preparations ride. That the attack plans may well have succeeded primarily because of their unorthodoxy and complete disregard to realities on the ground, is a different issue, what matters is that right upto 1 Dec 71, when orders were given for the suspension of all offensive plans in the western theatre, the preparations for the 10 Inf Div offensive had dominated all other activities. Even after 1 Dec, they continued to cast a pervasive influence over the defence posture adopted by the division.

As the crisis in the East deepened there was a palpable reaction along the Indo-Pakistan border. Due to increased activity opposite the Chhamb-Jaurian border, the covering troops were ordered to be deployed in the first week of Oct. This was followed by the occupation of the main defences by my brigade.

However, the preparations for the firm base west of Manawar Tawi, continued unabated. Since there was an acute shortage of defence stores, considerable amount of improvisation had to be resorted to in order to make the firm base viable.

On 1 Nov, the COAS visited the Sector. On the recommendations (and insistence) of the Corps and Div commanders, the COAS agreed to permit the deployment of 191 Inf Bde across the Manawar Tawi, ie in the firm base. No explanation was given for this move though the occupation of the firm base without any immediate plans for launching the offensive was patently unsound. This had nullified all the extraordinary measures adopted to conceal our intentions in this sector. However, it has been maintained that the holding of 'the forward defence line' across the Tawi had been planned as a part of the offensive. This was never conveyed to 191 Inf Bde. GOC-in-C, Western Command had protested to the COAS over this development, but was over ruled.

By mid Nov 71, Div HQ and div troops, 52 Inf Bde and the additional troops allotted for the offensive, 72 Armd Regt, 2 Indep Armd Sqn, 216 Med Regt and 106 Engr Regt, had been inducted. 191 Inf Bde now held areas Mandiala, Gurha, Phagla, Barsala, Jhanda and Manawar by 5 Sikh (with one platoon holding Buchoe Mandi) and 5 Assam with two coys ex 4/1 GR, west of Tawi. East of Tawi area extending from Chatti Tahli to Nawan Hamirpur, on the Chenab, was held by 4/1 GR less two coys and 10 Garh Rif. 57 and 51 BSF Bns were either completely replaced by regular troops or thinned out leaving small detachments mixed with regular troops for deception purposes. 52 Inf Bde was deployed in area Dhon Chak-Troti with a battalion on road Jammu-Akhnur to foil any threat emanating from Chicken's Neck. 68 Inf Bde was held back at Akhnur and not committed to the ground. 216 and 39 Med Regts were deployed in area Chapreal and Kachreal, whilst the bulk of the field artillery, consisting of 81 Fd Regt and a battery each of 12 and 18 Fd Regts were deployed West of Tawi in area Sakrana. This risk-laden forward deployment was basically for the projected offensive, it was stated. (The order of battle of 10 Inf Div is given in Appendix B.)

Mines had been laid all along the brigade front on both sides of the Tawi, except for gaps and lanes left for the offensive. A vital gap of 6000

yds in front of 5 Assam positions at Barsala had been left bare, despite my repeated protests. This was to facilitate the move of armour in Phase 2 of the Div offensive. The nuisance mines laid were ordered to be lifted later, since it was felt that they endangered own civilians. As a consequence the mines laid in Sukhtao Nala North of Mandiala were also lifted.

THE CHANGE TO A DEFENSIVE POSTURE

On 1 Dec 71 at 1930 hours at a conference held at Div HQ orders were issued for the adoption of a defensive posture as it had been decided that no pre-emptive action would be taken by India in the West. It was anticipated that hostilities may break out by 4 Dec. At the co-ordinating conference held on the afternoon of 2 Dec the following decisions were taken :-

(a) 4/1 GR less two companies were to hand over their responsibilities east of Tawi to 10 Garh Rif. 4/1 GR was to now hold areas Manawar, Jhanda, Malke Camp and Nageal with a company each. Area Mangotian was to be held by a platoon ex Mangotian coy.

(b) 5 Assam to hold area Pt 951, Barsala, Ghogi and Singri with a company each. The dummy minefield in front of the battalion was to be closed by 102 Fd Coy immediately leaving a few lanes for the offensive.

(c) 5 Sikh to continue to hold Pt 303, Phagla Ridge, Gurha with a company each and Mandiala North and South and Buchoe Mandi with a platoon each.

(d) 10 Garh Rif handed over the area from Garadh to Nawan Hamirpur to 16 Punjab (52 Inf Bde) and were to be responsible for area Chatti Tahli, Gigrial and Raipur Crossing. A Gp 9 Para Cdo were to be in location in the battalion area.

(e) 101 and 102 Fd Coys were to hold defence localities under 5 Sikh and 4/1 GR at Extension (a feature immediately west of Chhamb Bridge) and south of Chhamb village respectively, after completion of their engineer tasks.

(f) A Sqn 9 Horse was moved to Dervish Colony, and C Coy (GM) 12 Guards was deployed between Manawar and Barsala.

The deployment of the remaining division is pertinent to the operations across the Manawar Tawi. The threat through Nadala Salient and Chicken's Neck had been grossly exaggerated. Besides the fact that any build up in these areas cannot be concealed, the use of armour and heavy vehicles is

severely restricted. Basically only an infiltration threat existed from these areas. The deployment of two battalions (16 Punjab and 10 Garh Rif) and B Sqn 9 horse opposite Nadala and the holding back of 68 Inf Bde (less 5/8 GR at Troti) with 3/4 GR ex 52 Inf Bde to counter the threat from Chicken's Neck towards Akhnur and Jammu, could not really be justified. The deployment still had an offensive bias. It did not take into account that the real threat existed from Chhamb eastwards and this approach, particularly the eastern bank of Tawi needed to be guarded.

The situation west of Tawi at this juncture was that while the defended areas held by 5 Sikh and 4/1 GR besides being on dominating ground, were mined and reasonably well prepared (as far as 5 Sikh positions on Mandiala, Gurha, Phagla and pt 303 were concerned these had been prepared over the years being covering troops positions and even had concrete bunkers in a few localities) the 5 Assam defended area was cause for concern. It lay along the best armour approach on flat and featureless ground. If the enemy discovered the existing 6000 yard gap in the protective minefield they could roll up the defences along the shortest route to Darh and Raipur crossings. The depth companies at Singri, Malke Camp and Nageal would be able to offer only token resistance. 1965 would be repeated if they managed to simultaneously capture ground east of Tawi via the northern approach.

THE BREAK OUT OF HOSTILITIES - THE ENEMY PLAN

It is apparent that the Enemy plan to attack Chhamb-Jaurian Sector given below, had been made well before Dec 71; (Its model was the 1965 attack plan and was based on Chhamb being held by covering troops).

- (a) 7 AK Bde to engage areas in the hilly terrain held by 80 inf Bde and 28 Inf Bde.
- (b) 4 AK Bde to capture area astride the Sukhtao Nala and Mandiala Heights and establish a bridgehead east of Tawi.
- (c) 66 Inf Bde to capture area Gurha and Phagla and link up with 4 AK Bde in the bridgehead at Mandiala and Chhamb crossing.
- (d) The armoured brigade to break out from the bridgehead by first light, 4 Dec, and having captured Palanwala, to exploit eastwards.
- (e) III Inf Bde after having reduced the BOPs to capture area Pt 303 and Chhamb. (It appears that this brigade was earmarked for operations east of Tawi with the Armd Bde).

(f) 20 Inf Bde to capture areas Manawar and Jhanda and link up with III Inf Bde in area Chhamb.

H-hour was initially fixed at 2030 hrs, 2 Dec. This was subsequently changed to 2030 hrs, 3 Dec. In actual fact bombardment commenced 10 minutes early. A panicky Mujahid manning a 17 pounder gun was blamed.

SEQUENCE OF EVENTS-NIGHT 2/3 DEC

During the night 2/3 Dec 191 Inf Bde was busy readjusting its defences. 102 Fd Coy were to close the 6000 yds gap in the protective minefield at Barsala. Since these mines never fetched up, some 900 anti tank mines were allotted to 5 Assam from the brigade reserve. These were only partially laid, when heavy vehicular movements from across the border was reported. The brigade was placed on the alert.

DAY 3 DEC AND NIGHT 3/4 DEC

Morning of 3 Dec saw approximately a squadron of Sherman tanks deployed opposite Manawar and Jhanda between Hanj and Barila. All Pakistan villages were reported to have been evacuated. Despite exhortations not to panic (we wished to maintain an atmosphere of normalcy along the border as part of our deception plans for the offensive) our villagers too, had withdrawn.

The news that Pakistan had attacked our airfields at Amritsar, Pathankot and Srinagar, and that we were in a state of war, was conveyed at 1830 hrs. The brigade was immediately warned and evacuation of BSF personnel and remaining civilians ordered.

4/1 GR reported that tanks opposite them had started their engines. A Sqn 9 Horse was deployed in areas Manawar-Jhanda Barsala as a precautionary measure. Heavy vehicular movement from Padhar to the border was reported by 5 Sikh. A little later all BOPs, and the brigade sector were subjected to artillery shelling - Jhanda, Manawar, Moel and Pir Jamal receiving heavy punishment. This was followed by attacks on all these localities. Pir Jamal and the protective patrols ahead of Manawar and Jhanda fell back. The remaining attacks were beaten back. All these positions were again attacked twice during the night. They held on.

By midnight, the enemy had made contact with the main defences of 5 Sikh and 5 Assam, probably by infiltration. These attacks were beaten back. In the meanwhile, RHQ 9 Horse with B Squadron were allotted to 191 Inf Bde. A squadron of 72 Armd Regt was also moved forward to

Kachreal to be readily available to 191 Inf Bde. All the available armour was deployed in an arc extending from Moel to Manawar, except for two tanks of the RHQ at Gurha.

DAY 4 DEC

During the morning the enemy concentrated on 5 Sikh screen at Moel. Some tanks and jeep mounted rcl guns had penetrated between Moel and Bokhan. There was uncertainty about the protective patrol at Paur. A Sqn 9 Horse, operating ahead of the FDLs managed to clear the enemy armour knocking out three tanks in conjunction with the GM det at Barsala. The other screen positions at Burejal, Bokhan and Dalla had not been touched, so it was decided to hold on to Moel, which had already withstood two attacks.

In the meanwhile, reports began trickling in from 28 Inf Bde positions north of Dewa of enemy armour and infantry columns moving towards Gurha and Mandiala. 5 Sikh also reported Mandiala North under pressure. The enemy had infiltrated between the minefield and FDLs and attempts to eject them had failed. At 1230 hrs the position was reported over run, with the remnants of the platoon having fallen back on Mandiala South.

The loss of Mandiala North opened the way to Mandiala Crossing. The guns and concrete bridge were now directly endangered. In view of the prevailing situation and the realisation that the enemy strength had been grossly underestimated, GOC 10 Inf Div, ordered 68 Inf Bde to counter attack Mandiala North. 7 KUMAON, located at AKHNUR, was earmarked for the task by 68 Inf Bde. In the meanwhile, besides side-stepping A Gp 9 Para Cdo to east of Mandiala Crossing to reinforce the troop, C Sqn 9 Horse, B Sqn was moved to Phagla, which was under attack. The enemy lost six tanks and the attack was broken-up.

The screen positions at Moel, Bokhan, Burejal and Dalla Camp were under heavy pressure. They were ordered to be withdrawn, since the FDLs of 5 SIKH and 5 ASSAM had already been contacted by the enemy. However Moel (5 SIKH) and Burejal (5 Assam) platoons with two officers and men were over run. Dalla (5 Assam) lost an officer and 6 men. In other words, almost three platoons were written off from forward companies of 5 Sikh and 5 Assam, who were already thin on the ground.

A determined attack was launched against Manawar by infantry supported by armour at 1500 hrs. This was beaten back but Maj Lakhnan Pal, the Coy Commander was killed. Jhanda, too beat back an attack. Whilst the situation in 4/1 GR stabilised somewhat after this, the enemy continued

to probe 5 Sikh and 5 Assam defences. It was evident that the success of the enemy trying to establish themselves east of Tawi, would hinge on his ability to capture Phagla, Pt 303 or Barsala. All efforts were, therefore, made to prevent him from doing so.

At about 1545 hrs, GOC 10 Inf Div informed me that 7 Kumaon's move forward had been disrupted due to enemy shelling and that he had decided to deploy the battalion instead to cover the Mandiala crossing. Almost 4 hrs had been wasted in launching the counter attack on Mandiala North. At that time the situation was extremely fluid. The only troops that could be lifted from within the brigade, were the two companies of 4/1 GR at Malke Camp and Nageal or 5 Assam Company at Singri. After studying the pros and cons, a decision was taken to counter attack Mandiala North with the company less a platoon at Malke Camp (the third platoon was at Mangotian). 101 Fd Coy at Extension was ordered to move to Malke Camp. (This it never did, though Extension was vacated. The reasons for this were lack of communication between the field company and 4/1 GR, for which the latter must take the blame). The counter attack ordered at about 1600 hrs did not take place till 2030 hrs. The excuse given was that the troops were unfamiliar with the terrain and elaborate briefing by 5 Sikh was necessary. Even though the attack was supported by tanks of B Sqn 72 Armd Regt, which had been inducted at 1900 hrs and had night firing capability, and was later reinforced with a platoon of 5 Sikh, only a portion of the locality could be captured. The company commander was wounded and the senior JCO killed. The position being untenable the company had to be withdrawn. Not only did this company not return to Malke Camp but its platoon at Mangotian vacated its position, when it found the remainder of the company missing from Malke Camp. This position had to be retaken next day, after it was occupied by the enemy, by launching a counter attack with armour and a platoon of 4/1 GR.

In the afternoon the enemy attacked Phagla and Pt 303 in a determined bid to effect the link up with 4 Ak Bde. Heavy shelling and a number of air attacks continued unabated. Our own air effort was negligible. Of the three missions demanded, only one was executed.

NIGHT 4/5 DEC AND DAY 5 DEC

During the night Pt 303 and Phagla were again attacked. By dawn, A Gp 9 Para Cdo reported having been attacked by enemy infantry in area east of Mandiala Crossing. Whilst they had repulsed the attack, they reported that there were no signs of either 7 Kumaon or Sqn 72 Armd Regt, who were to reinforce their position. The troop 9 Horse had, however, destroyed six enemy tanks in Mandiala crossing. By 0830 hrs the enemy (later identified

as 13 AK Bn and elements of 47 Punjab, ex 4 AK Bde) had not only overrun 216 Med Gun positions, but captured the Chhamb Bridge. 39 Med Regt had engaged the enemy with 'open sights' and inflicted a number of casualties.

The bridge was recaptured by a two-prong attack from the east and west by a company 5/8 GR and platoon ex 5 Sikh with two tanks of RHQ 9 Horse respectively. The bridgehead formed by the enemy was in disarray. Desperate attempts by 66 Inf Bde to effect a link up with the troops on the east of Tawi, by attacking Phagla and Pt 303 failed. The armour had already been bottled up in Sukhtao Nala. The two battalions that had crossed over suffered grievous losses (one report said 13 AK Bn had just 17 Survivors after this action). Mopping up continued well after 6 Dec. However we too had not been spared - 216 Med Regt had been rendered completely ineffective and 39 Med Regt could give limited support only to the troops west of Tawi on 4 Dec.

The enemy made two more futile attempts to capture Phagla and Pt 303. They then diverted their attention to Ghogi and Barsala both these localities being attacked more than once during the day. At 1630 h during an attack on Pt 303, Maj DS Pannu, the Company Commander was killed but the locality held on. Air attacks and heavy shelling of brigade sector continued throughout the day. Jhanda and Manawar, which had some respite till then, were again attacked at 1700 hrs.

In the afternoon, GOC 10 Inf Div rang up and gave me two alternatives - both unsavoury. To withdraw to the main defence positions at Troti or to adjust my defences along line Nagea-Malke Camp Barsala and abandon Manawar and Jhanda. It was pointed out, that at this juncture, with all my defences intact, barring Mandiala North, the question of withdrawal should not even be considered. (Since, the GOC was directly responsible for the forward deployment of the troops against my advice, the suggestion was to say the least, surprising). Similarly, to readjust along the line recommended with the localities at Jhanda and Manawar locked in battle and no prepared defence line in depth, would be disastrous. It was requested instead that my sector be reinforced with an infantry battalion and additional armour, to give me a readily available reserve, uncommitted to the ground. Maj Gen Jaswant Singh who was a pragmatic and understanding commander, readily agreed. 5/8 GR, less a company deployed at Chhamb Bridge, and A Sqn 72 Armd Regt were allotted. 10 Garh Rif was placed under command 52 Inf Bde. 5/8 GR on arrival at 2200 hrs was deployed in depth areas in Bahleal and Sakrana. A Sqn 72 Armd Regt arrived the next day.

In the meanwhile all artillery deployed in Chhamb Sector was withdrawn to east of Tawi. Despite an assurance given that artillery support would not be affected during the withdrawal, but with 216 Med Regt already hors de combat, the artillery support after this readjustment was severely curtailed. It had a direct bearing on the subsequent fighting. 5 Assam, for instance, could be supported only by a battery of 18 Fd Regt firing at extreme range at a critical phase of the battle.

At about 2030 hrs the enemy managed to over run the Ghogi locality held by a company of 5 Assam. A counter attack with the depth company at Singri and armour in support was immediately ordered. The position was recaptured, though the company commander Maj Makin was killed and the company suffered 20 other casualties. The Ghogi company was again attacked during the night and had ten more casualties.

DAY 6 DEC

As the battle progressed the effects of almost continuous shelling, strafing and physical assaults by the enemy on the most localities began to tell. Besides sleeplessness (every one had been on their feet since 2 Dec), number of weapons had been either damaged or were malfunctioning due to dust and dirt and lack of maintenance. 5 Assam fighting from open trenches, which suffered fairly heavy casualties (5 officers were killed besides a number of OR) was particularly affected. However, they continued to beat back the enemy attacks.

During the night 5/6 Dec, enemy either demonstrated in front of or attacked most localities, 5 Sikh positions, particularly Pt 303 receiving special attention. He managed to penetrate the defences of the Phagla Company, where hand to hand fighting ensued. The attack was repulsed. Captured documents revealed the order of battle and the fire plan of the enemy which, more or less confirmed our own assessment though the employment of five brigades and artillery (almost 11 to 12 regiment worth) came as a shock.

(It is now revealed that Maj Gen Eftekhari Janjua, GOC 23 Inf Div realising the failure of 4 AK Bde to establish a bridgehead across the Tawi at Mandiala Crossing reshaped his plans. The armoured brigade with one Infantry battalion, was ordered to capture Chhamb village from a southeasterly directly, in conjunction with 66 Inf Bde, who would converge on Chhamb, after capturing Phagla Ridge and Pt 303).

At 0630 hrs, the enemy at last managed to capture Pt 303. The remnants of the company fell back on Brigade HQ. The officiating company

commander (Capt Kamal Bakshi) was reported killed and tanks of B Sqn 9 Horse rendered ineffective. This was a very serious development. The way to the Darh and Raipur crossings now lay open. A counter attack with a company 5/8 GR and a platoon 5 Sikh from the North via Sakrana was immediately ordered. B Sqn less troop 9 Horse was ordered to attack Pt 303 at the same time, from the direction of Khairwal. In case Pt 303 could not be captured, the armour was directed to block this approach and prevent further ingress. B Sqn 9 Horse recaptured Pt 303 meeting only token resistance - the enemy had managed to push in two tanks through a minefield lane. These were destroyed. Company 5/8 GR, not being familiar with the terrain, initially attacked an area north of Pt 303. When this mistake was discovered the company was ordered to advance southwards till they linked up with own armour. They cleared the area destroying two MMGs and killing 70 enemy soldiers (2 MMGs and 60 rifles were captured). Pt 303 was recaptured by 0930 hrs, three hours after it was over run by the enemy.

Between 0630 and 1000 hrs, the enemy launched co-ordinated attacks with infantry and armour against all three companies of 5 Assam. He managed to penetrate between the dummy minefield and FDLs of Ghogi Company, which suffered 5 killed and 33 wounded/missing. However, even though he hung on, the enemy, too, suffered heavy losses in armour and personnel. There were reports of a large armour build up opposite Jhanda and Pt 951. The area was accordingly reinforced by own armour. In the meanwhile A Sqn 72 Armd Regt began arriving. This Sqn was also deployed to cover the front of 5 Assam as also Pt 303.

There had been substantial losses in armour. The piecemeal induction of armour, overlapping of tasks and intermingling of troops of 9 Horse and 72 Armd Regt had led to serious command and control problems. It was decided to rationalise the armour deployment so that squadrons could function as sub units under their respective commanders. However, this re-deployment could not be effected due to subsequent events.

The lull between 1000 and 1400 hrs, was short lived. 5 Sikh reported that Gurha company, which had been under pressure for some time, had been over run by enemy armour and infantry. Shortly afterwards 5 Assam reported the loss of Ghogi Company. This posed a dilemma. The only infantry available was a company plus 5/8 GR (it appeared that even though only a company had been earmarked for the counter attack on Pt 303, in actual fact more than a company had been committed there) thus the brigade had the capability of launching only one local counter attack. It was an extremely difficult decision to make since both localities blocked approaches to ground vital to the integrity of the brigade defended sector,

and were of equal importance. The matter was taken out of my hands by Pt 951 and Barsala falling in quick succession to enemy armour. The whole of 5 Assam defended area was now in enemy hands. The recapture of this area was beyond the capability of an infantry company. Accordingly, it was suggested to the GOC that either he launch a division level attack to retake the 5 ASSAM positions or an additional battalion be allotted to the brigade for this purpose. In the meanwhile he was informed that Gurha was being counter attacked with company, 5/8 GR and armour.

The GOC expressed his inability to launch either a counter attack or make available additional troops for 5 Assam positions, due to the prevailing situation. He instructed me to re-adjust the southern sector by withdrawing 4/1 GR company from Jhanda and redeploying it in area Malke Camp-Singri. Whilst Gurha was recaptured by 1800 h the re-adjustment along line Pt 303 Singri-Manawar could not be carried out as Singri was found occupied by the enemy. The Jhanda company seeking directions from his battalion commander, found that he was out of communication. He, therefore, withdrew to east of Tawi. Bn HQ 4/1 GR had been forced to abandon their position when some armour was observed moving from Singri towards Chak Pandit. The remnants of the company at Nageal and Bn HQ 5 Assam also withdrew to east of Tawi. Wireless communication had been disrupted and the news of both battalions falling back was conveyed through artillery radio nets.

A little later, Mandiala North was reported lost.

The armour was deployed along line Bahleal-Khairwal with orders not to permit any further ingress. It was anticipated that the enemy would not advance further during the night and if he did some token resistance could be offered by Bde HQ defence locality at Chhamb village.

At 1900 hrs GOC 10 Inf Div, after consultations with GOC 15 Corps, ordered the withdrawal of the brigade from west of Tawi to their main positions at Troti. The withdrawal was completed by 2330 hrs.

CONDUCT OF OPERATIONS EAST OF TAWI

In the meanwhile, 10 Inf Div had deployed 68 Inf Bde along the east banks of Tawi, with 7 Kumaon holding area of Mandiala Crossing, 5/8 GR astride the road, and 9 Jat on Darh Crossing. 10 Garh Rif was responsible for Raipur Crossing and area south of 68 Inf Bde.

It is known that the enemy did not make any progress during the night 6/7 Dec. The area west of Tawi was finally occupied by early morning

of 7 Dec. Since the time plan for the offensive was now completely upset GOC enemy 23 Inf Div, not savouring further delay (GHQ Pakistan, had already withdrawn an armoured regiment from the sector due to pressure elsewhere) ordered an attack to be launched across the Tawi at 1700 hrs, ie after $1\frac{1}{2}$ hours from issue of orders at 1530 hrs. The assaulting commanders request for postponement of H Hr was vetoed. The attack broadly envisaged the armoured brigade with an Infantry battalion capturing area upto Palanwala by last light, 7 Dec. This was to be followed by 111 Inf Bde capturing Khaur and Jaurian and relieving the armoured brigade.

The attack was postponed to 0100 hrs, 8 Dec as the assaulting battalion commander was wounded due to shelling. However, this time the infantry never turned up. The artillery nevertheless, began its bombardment as per schedule at 0030 hrs and continued till 0130 hrs. A further postponement to 0800 hrs, 8 Dec was ordered. A half hearted attack was eventually launched by two companies against 10 Garh Rif at Chatte Tahli. This was easily beaten back, with heavy loss to the enemy. The enemy then called off the attack, and the armoured brigade was now ordered to capture Palanwala by last light, 9 Dec. At 1600 hrs, 9 Dec, Gen Estekhar Janjua's helicopter crashed killing the general. The command of 23 Inf Div now devolved on Brig Kamal Matin.

Whilst some demonstrations continued against 7 Kumaon, 5/8 GR and 9 Jat, effective artillery fire deterred any worth-while attempt being made against any of these localities. It was only during night 9/10 Dec, that a co-ordinated and determined attack was launched by the enemy on localities guarding Darh and Raipur crossings. The assault by the leading battalion was virtually broken up at the start line by own accurate and concentrated artillery fire, both company commanders and CO being wounded. However, at 0630 hrs, both 10 Garh Rif and 9 Jat companies were attacked at the crossings. It appears that the enemy penetrated between the FDLs and attacked the depth company of 9 Jat, over running it and causing heavy casualties. This was possible as mutual support between forward companies had been limited due to a thick growth of sarkanda on the east bank of the Tawi which had been allowed to stand in order to conceal own forward movement during preparation for the offensive.

The Raipur and Darh companies fell back. A counter attack was launched from the north with 3/4 GR and 9 Horse to recapture Darh. However, the tanks were bogged down in the soft ground, (as CO 9 Horse had predicted) and the attack fizzled out. As communications with forward companies were disrupted, the fog of war descended on the battle field. GOC, 10 Inf Div, considered the withdrawal of the two brigades to depth

positions behind Troti. When this was suggested to higher HQ, GOC 15 Corps flew down and assumed control. He ordered a counter attack to be launched from the north with a company each from 5/8 GR and 7 Kumaon, for recapturing Darh. At the same time 10 Garh Rif was ordered to counter attack Raipur Crossing from the south with a company. In the meanwhile, the enemy had suffered heavy losses, particularly in armour (six tanks had been lost whilst crossing the Tawi itself). This coupled with reports of heavy vehicles moving from Akhnur towards Jaurian, decided the issue. At 1230 hrs, all Pakistani troops were withdrawn from east of Tawi.

Unaware of these developments, our troops launched the counter attacks as planned. Both localities were captured without any oppositions, by 1900 hrs. However, the news of the capture of Raipur Crossing were delayed. In the confusion 3/4 GR was ordered to counter attack Raipur already held by 10 Garh Rif. The mistake was soon discovered and not much damage was done. This would not have been the case had A Gp 9 Para Cdo carried out its orders to launch a counter attack from the east on Raipur and Darh Crossings, in conjunction with the counter attacks from the north and south.

After this the enemy made no further attempts to cross the Tawi, and the situation stabilised. Preparations for the counter offensive by own troops continued, till the declaration of cease fire on 17 Dec 71.

WHAT WENT WRONG

On reflection and with the benefit of hindsight, I feel Chhamb need not have been lost. One factor which is forgotten, is that when the orders for withdrawal were given on 6 Dec, no one could have imagined that the war with Pakistan would end so abruptly. In a prolonged war, trading space for time would have made good sense. It is axiomatic that the aggressor in the initial stages of war will gain some modicum of success, for both surprise and initiative will be on his side. This success could have been turned to advantage had time been with us. After the cease fire, the COAS addressed the troops. He expressed his dissatisfaction with the performance of 10 Inf Div. At the end he asked whether there were any doubts. A havildar from the artillery asked "Sir, if you wanted to see us in Pakistan, then why did you declare a cease fire?"

AIM

The basic error committed was that we were never clear of our aim. Had this been unambiguous, an almost impregnable defence posture could have been adopted in the time available to us. The deployment of 10 Inf

Div was a compromise between an offensive and a defensive posture. What was unpardonable was that in the two months preceding the outbreak of hostilities, the task of the division in general and that of the brigade in particular, was changed four times. From deliberate defence in Troiti, to an offensive, thence to a forward posture, which also entailed safeguarding the sanctity of the CFL, and finally on 1 Dec, the adoption of a defence posture.

INTELLIGENCE

Though adequate intelligence of enemy concentrations opposite Chhamb was available, a proper analysis was not made of likely enemy intentions. Whilst the threat to this sector was deliberately underplayed, the threat to 25 & 26 Inf Divs was blown out of proportion. The reasons for this are not far to seek as far as 10 Inf Div is concerned. Had the actual threat been correctly evaluated then the offensive for which the division had slugged for over a year, would have been permanently shelved. The higher intelligence, particularly R & AW, actively aided and abetted this assessment, by stressing that the main enemy thrust would be towards Punch.

GROUND

There is much made out regarding the importance of Mandiala heights and faulty reading of ground in the deployment of troops west of Tawi. It was not appreciated that the Sukhtao Nala approach could have been a death trap for armour, and that development of an offensive southwards towards Gurha-Chhamb from Mandiala, was also extremely difficult. By adopting the northern approach via Sukhtao Nala the momentum of the attack, was broken. It gave us the much needed respite to deploy 68 Inf Bde to guard all the crossing places on the Tawi in the North. Had this been done at the outset, not only would the medium guns have been saved, but 68 Inf Bde would have carried out its counter attack tasks in 191 Inf Bde sector, for which it had been earmarked, more efficiently. Further, a more pragmatic appreciation of the threats from the Nadala salient and through the Chicken's Neck should have been made. Because of the over assessment of enemy capabilities from these directions a disproportionate number of troops were deployed to cover the imaginary threats which were not corroborated by troops in contact. The deployment of the other two brigades could then have been rationalised. Logically, 68 Inf Bde, which was the corps reserve, should have been retained intact in Akhnur and given the task of guarding Akhnur and the Road Akhnur-Jammu. Since the threats in these areas were basically from infiltrators, its lifting for other tasks would not have seriously jeopardised the defence of either Akhnur or Jammu. 52 Inf Bde, which was under-utilised, should have been deployed to cover all

the crossings on the Tawi. This could have been done with two battalions (ie 10 Garh, which should have been placed under command of 52 Inf Bde at the outset, and 3/4 GR which was protecting the Jammu-Akhnur road). The third battalion (16 Punjab) with 10 Garh company in Chatti Tali, plus the BSF could have adequately covered the Nadala salient. The fourth battalion, 7 Garh Rif positioned at Troti would have been available as reserve.

EMPLOYMENT OF ARMS

The misuse of armour has already been commented on. It was seldom used concentrated as squadrons. The reasons for this have already been given as well as the compulsions for mixing tanks of 9 Horse and 72 Armd Regt. Contingency planning for additional induction of armour west of Tawi was never done.

The forward deployment of artillery to cover depth target during the offensive, should have been rectified once the decision to adopt a defensive posture was taken. 216 Med Regt deployed opposite Mandiala Crossing was particularly vulnerable. The regiment's failure to cater for local defence against ground attacks resulted in the gun areas being over run. Similarly, deployment of 81 Fd Regt, a battery each of 18 and 12 Fd Regts, west of Tawi, was unjustified. Their withdrawal during a critical phase of the battle, was a major contributory factor in some localities being over run. The fire support, however, was most effective, not withstanding the disadvantages under which the artillery operated.

The engineer companies (101 and 102 Fd Coys) were never meshed in properly with the battalions in whose areas they were deployed. This was partly due to lack of time and partly due to lack of communications with the battalions.

PL routes unless properly buried have little chance of survival in modern warfare. Radio communications had to be used extensively due to frequent disruption of line communication. These were not secure. On one occasion, the Pak 23 Inf Div net seemed to be functioning on the same frequency as 191 Inf Bde forward net.

The infantry withstood a number of attacks and intense and continuous artillery bombardment, as also fairly frequent air attacks. However, patrolling was not carried out sufficiently to dominate no-man's-land with the result contact was often lost with the enemy. There was also a tendency noticed to rely heavily on armour and artillery and a reluctance to use own integral weapons. The loss of commanders, led to rapid disintegration of control in some cases.

AIR SUPPORT

While the enemy was most active from 4 to 6 Dec (74 Air attacks were launched on our defences on 4 and 5 Dec, and 3 more on 6 Dec) our own response was negligible. The brigade had demanded 3 missions each on 4, 5 and 6 Dec. Out of these 3 were executed, of which only one was effective. This as stated was not the fault of the IAF, who had made some radical changes in the concept of air support to the ground forces, particularly ensuring liaison at all levels well in time. The fault lay with the higher HQs, who had already spelt out priority sectors for air support. Nevertheless the air attacks by Pakistan Air Force had little effect on our defences, except for its psychological impact.

CASUALTIES AND BATTLE FATIGUE

It is maintained that a simple method of gauging a unit's performance is to calculate the number of personnel casualties it has suffered. 10 Inf Div suffered a total of 1343 casualties (430 killed, 723 wounded and 190 missing, out of which 23 officers were killed, 36 wounded and 5 missing). The bulk of these occurred west of Tawi. Contrast these with casualties suffered in other sectors in the west :-

	<i>Killed</i>	<i>Wounded</i>	<i>Missing</i>	<i>Total</i>
Punch	130	23	5	158
15 Corps	188	653	61	902
1 Corps	301	873	151	1325
11 Corps	371	888	348	1607

It is apparent that a formation or unit's performance cannot be judged from the casualties suffered. If this was so then 10 Inf Div would come out with flying colours. There are other factors which influence men's will to fight. The chief amongst this is battle fatigue. The effects of sleep deprivation can have far reaching result on soldiers. Disorganisation of mental processes can occur which can lead to slow thinking, loss of concentration, incoherence and the inability to recognise or correct errors. The heavy and persistent attacks on companies* proceeded by concentrated artillery fire, aerial bombardment and tank firing had rendered a large number of weapons ineffective and destroyed most defence works. Just before cessation of hostilities, on the enemy side approximately 35 rounds of ammunition per gun remained, according to a Pakistani gunner OP, who defected to own side.

* The severity of the fighting can be gauged from the summary of actions fought by 191 Inf Bde from 3-6 Dec 71, given at page 33.

COUNTER ATTACKS

Whilst it was apparent that timely local counter attacks launched had proved successful at Ghogi, Mangotian, Pt 303 and Gurha, no deliberate counter attack at higher level west of Tawi, was even considered. A proposal was made to the GOC by me, after Gurha had been recaptured that he may consider launching a division level counter attack on the abandoned 5 Assam positions at Ghogi and Barsala. However, at that stage due to paucity of troops at his disposal and the prevailing uncertainty, he advised the readjustment of 4/1 GR positions. By accepting this advice, the fate of Chhamb was sealed.

The only opportunity to restore the situation was lost. Fresh induction of troops in the void created by the abandonment of positions by 5 Assam, would have stabilised the situation. It is likely that had this been done Chhamb would not have been lost. However this is hind sight. It must be remembered that the GOC had to, in the fog of war, decide whether by reinforcing Chhamb Sector he would ensure the security of area West of the Tawi? OR whether he would have been only re-inforcing failure?

ORDER OF BATTLE OF PAKISTAN TROOPS
EMPLOYED IN CHHAMB BATTLE

HQ 23 Inf Div.

1. Armour - 11, 25 and 28 CAV

2. Artillery - 17 and 23 Inf Div Artillery Brigades composed of 11 and 39 Fd Regts (25 pounders), 50 and 63 Fd Regts (122 mm how), 28 and 64 Med Regts (155 mm how), 51 Comp Mtn Regt (105 mm how and 3.7 in how), 71 Mtn Regt (105 mm how), 81 AK Bty (8x25 pounders), 285 Div loc Bty (6x3.7 in how), sec 7.2 in guns ex 145 Hy Comp Med Hy Regt and 16x17 pounder guns manned by Mujahids. A total of approximately 31 fire units.

3. Infantry - 19 Baluch R & S Bn

(a) 66 Inf Bde ex 17 Inf Div (4 Punjab, 23 Baluch, and 33 FF)

(b) 20 Inf Bde (14 Punjab, 47 Punjab and 17 FF)

(c) 111 Inf Bde (8 Punjab, 42 Punjab and 10 Baluch)

(d) 4 AK Bde (2 AK Bn, 3 FF, 6 AK Bn and 13 AK Bn)

(e) 7 AK Bde (1, 4 and 8 AK Bns)

(f) Additional units - Wing Mahsud Scouts, Wing Zhob Militia, one Mujahid Coy, Ak Rangers, Chenab Rangers one Ak Sp Coy, three Ak anti tank Coys.

Appendix B

ORDER OF BATTLE-OWN TROOPS
(as on 3 Dec 71)HQ 10 Inf Div

1. Armour - 9 Horse (T-54), 72 Armd Regt (T-55) and 2 (Indep) Armd Sqn.
2. Artillery - 12, 18 and 81 Fd Regts, 39 Med Regt (5.5 in) and 216 Med Regt (130 mm), 86 Lt Regt, Bty 45 AD Regt, Tp 151 AD Regt and 1-27 Div loc Bty.
3. Infantry
 - (a) 28 Inf Bde (5 Rajput, 2 JAK Rif, 8 J&K Militia)
 - (b) 52 Inf Bde (16 Punjab, 7 Garh Rif and 3/4 GR)
 - (c) 191 Inf Bde (5 Sikh, 10 Garh Rif, 5 Assam, 4/1 GR, C Coy 12 Guards and Gp 9 Para Cdo)
 - (d) 68 Inf Bde (Corps reserve) - (9 Jat, 7 Kumaon and 5/8 GR)
4. Engineers (61 and 105 Engr Regts)
5. Signals (10 Inf Div Sig Regt) and 68 Inf Bde Sig Coy)
6. Para Military - 51 BSF less two Coys and 57 BSF

SUMMARY OF ACTIONS FOUGHT WEST OF MANAWAR TAWI

	3 Dec (Hrs)	4 Dec (Hrs)	5 Dec (Hrs)	6 Dec (Hrs)
MANAWAR and JHANDA	2145 Two coys/ armr	0300 Probing 1500 One inf bn/armr	-	0530 Two inf coys
PT 951	-	-	-	0630 One inf coys 1715 Two inf coys armr . Over run
BARSALA	-	1800 Feint	0730 Two inf coys	0630 Two inf coys & armr 1730 Over run by two inf coys/armr
GHOGI	-	0030 One inf coy	0730 Two inf coys 2020 Two inf coys/armr over run 2320 Counter attacked & recaptured	0100 Probing 0630 Probing 1600 Over run by inf/armr
Pt 303	2330 Probing	1800 Two inf coys	0400 Probing 0600 In strength 1500 Probing 1600 In strength	0430 Two inf coys/armr 0630 Over run by inf/armr 0930 Counter attacked and retaken
PHAGLA	2330 Probing	1430 Probing	0400 Probing 0600 In strength 1130 Probing	0530 Partially over run but enemy ejected
GURHA	-	1130 Probing	0600 Probing	0300 Inf Bn/armr 0435 Inf Bn/armr 1400 Over run 1700 Counter attacked & retaken
MANDIALA (North)	2330 Probing	1230 over run 2030 Counter attacked unsuccessfully		
MANDIALA (South)				1730 over run

Three Problems of Indian Armour

RAVI RIKHYE

Three problems of Indian Armour are worth analysis. (1) The imbalanced composition of the strike corps. (2) The shortage of reserve tanks. (3) The problem of the rapid advance. Here the problems and possible solutions are merely outlined in the hope that experts might take up the matter in greater detail.

THE IMBALANCED COMPOSITION OF THE STRIKE CORPS

I Corps has an armoured division plus two or more infantry divisions; II Corps has an armoured and a mechanised division, plus one or more infantry divisions. Both Corps are imbalanced, though I less than II.

In I Corps, the two infantry divisions can be used to open a breach in the enemy defences and the armoured division can exploit. But the exploitation is forced to be of short range because the infantry divisions cannot keep up.

Whereas I Corps is, at least, symmetrical, II Corps has three completely different kinds of divisions with quite different capabilities.

The Army 2000 plan, which can now be considered defunct, called for four corps each of one armoured and two mechanised divisions. These corps were quite logically planned. The mechanised divisions would open the breach and the armoured division exploit; as the former has equal mobility with the latter, the advance could be rapid and self-sustaining.

The difficulty is perceived as being a shortage of resources which prevents the formation of new tank and mechanised divisions. Actually, there are already enough tank regiments to support the Army 2000 plan of 4 armoured, 8 mechanised, and 7 RAPID divisions. (The infantry division would have disappeared from the Order of Battle, additional to the above would have been 19 mountain divisions.) Admittedly there would have had to be minor modification of the Army 2000 Tables of Organisation to fit the plan to the existing number of tank regiments.

For example, mechanised divisions would have to use 3 tank regiments and not 4; and the logical independent armoured brigade for each plains corps would have to be deferred till more resources were made available. Still, a three division corps without an independent brigade as reserve is not unduly handicapped, and a mechanised division of 3 tank regiments is adequate in most situations.

The real difficulty is a shortage of mechanised infantry battalions. The Indian Army is infantry dominated in mentality; since for so long tanks were seen merely as an adjunct of the infantry there was no great reason to mechanise the infantry. A mechanised battalion may not cost as much as a tank regiment, but it requires as much effort to raise, train and maintain. So even after the need for more mechanised infantry became apparent in the mid-1970s, the progress of the last 15 years has been painfully slow. Whereas two mechanised battalions should have been raised for every tank regiment, in practice the growth has been more nearly one-to-one, with the result there are twice as many tank regiments as mechanised infantry battalions.

Nonetheless, there is an intermediate solution to the problem of imbalanced strike corps. If the mechanised battalions are pooled, there are sufficient to support three tank and three mechanised divisions. At the moment this pooling would leave the independent armoured brigades short of mechanised infantry, even assuming (as is done here) that many of these brigades would be absorbed into the new tank and mechanised divisions and thus eliminated as independent brigades.

For example, the third armoured division would be built around two existing armoured brigades, and the two new mechanised divisions would take as their core an independent armoured brigade each plus mechanised infantry from the RAPID divisions. This would mean the demise of the RAPID divisions and their reversion to infantry. But it is doubtful if many tears will be shed over this.

It is likely, however, that in the three years it would take to fully raise and train the new divisions (even with most of their troops coming from existing formations) that new mechanised raisings would become effective. It should, then, be possible to maintain the six divisions plus, say, four independent armoured brigades.

Two problems with this approach are obvious. There will be a shortage of artillery both self-propelled field/medium and SP air defence, and the organisation of one of the two strike corps into two tank and one mechanised divisions does not really suit the Indian operational environment.

There is no help for the artillery shortage, particularly as the program to equip the Vijayanta chassis with a modern 155 mm turret is far behind schedule. As for the corps of two armoured divisions and a mechanised division, it could be employed in more open sectors, i.e., south of Ft. Abbas. The defence is sparse, and an armoured division can easily open breaches which in other sectors would require mechanised divisions.

Alternatively, since the need is for only three more mechanised battalions to equip a second mechanised division for this corps (armoured divisions = 6 tank regiments, 3 mechanised battalions ; mechanised divisions = 3 tank regiments, 6 mechanised battalions), it might be worthwhile to reactivate the older wheeled APCs to make up the deficit.

The proposed solution and the above sub-solution cannot be considered optimum. But it will provide, at least, two fully mobile corps. If both are operated as a pair instead of sent to widely separated sectors, these corps with their six divisions offer the chance of attaining decision in a future war. The mobile divisions of the old German Army constituted 10-15% of the total, but they were more important than the remaining 85-90%. The same could be true here.

THE SHORTAGE OF RESERVE TANKS

This problem is simply stated. In the kind of mobile tank warfare envisaged under Exercise *Digvijay* and *Brasstacks*, tank losses will soar beyond anything the Indian Army has experienced. The relatively low losses experienced in 1965 and 1971 are no guide to what will happen. Because of the expansion of the adversary's anti-tank defence (TOW, TOW-Cobra, Copperhead, Maverick) losses such as those suffered by Pakistan 1 Armoured Division in 1965 could become typical.

Even a cursory study of Liddell-Hart's *The North African Campaign* shows the high losses inherent in mobile battles, both to mechanical failure and to enemy action. Regiments losing 75% of their tanks in a single day and brigades losing 50% were not uncommon occurrences.

It might be reasonable to predicate 25% losses for each day of action. To achieve a strategic decision might require 15 fighting days. Even providing for recoveries (assuming we will be advancing), the existing reserves of 15-20 tanks per regiment will get wiped out in 3-5 days of fighting.

Ofcourse, not all regiments are likely to be equally engaged. But given the width of the front on which armour will be deployed, 1500 km, it will prove difficult to accurately position and deliver tanks to regiments requiring them. Without adequate and timely resupply, the advance will grind to a halt. It will prove difficult to get it restarted, and we will require 6-8 weeks for a strategic decision.

A minimum of 45-55 reserve tanks per regiment would appear necessary. This can be provided either by slowing equipment of new

regiments, or by keeping older tanks like T-54/55s in good working order for issue as required.

Again, neither solution is ideal. It would be best if Avadi could be made to deliver its programmed annual total of 250 tanks combined with an immediate buy of surplus tanks from the Soviet Union. Avadi, however, is not under the Army's control any more than the already overstrained equipment purchase budget.

BMP losses will be harder to estimate. If the Army is really serious about using its BMPs as ICVs and its mechanised infantry in the mounted role, losses could be horrendous as the BMP is vulnerable even to rocket propelled grenades. If, however, the BMP is used more prudently as an armoured taxi, then losses could be considerably more moderate. The solution to providing more BMP reserves would be similar to those suggested for tanks.

THE PROBLEM OF THE RAPID ADVANCE

Given the high probability that a war in the west will bring rapid foreign or international interventions or pressures to cease-fire, the problem of the rapid advance assumes paramount significance.

The great mobile warfare victories of the 20th Century, however, have little relevance to our situation today. The Germans overran Poland, France and Russia because they were the first to fully utilise the potential of the tank-fighter team. In effect, they developed a unique weapon which, combined with their great mastery of the tactical art, gave them relatively rapid victories. The Soviets in their Manchurian campaign of 1945 faced a defeated Japan, already brought to its knees, not least by the atomic bombs. The 1956 and 1967 Sinai campaigns featured a very competent military machine versus an incompetent one. The 1971 East Pakistan campaign showed only that a defender has an impossible task when his population is hostile, his forces are blockaded, his army is outnumbered 2-1, and he has no air cover after the first 3 days of fighting.

None of this applies to the western front today. Moreover, whereas in 1987 Pakistan could concentrate only 4 divisions south of Ft. Abbas (1 Armoured, 16, 18 and 37 Divisions), in 1990 it can concentrate 7 while still mounting a major offensive in the north. Conversely, whereas we could concentrate 10 divisions plus several large armoured brigades in the same area, today some of those divisions will be required for internal security and to meet the Pakistani offensive in the north.

The Army's answer to the problem of the rapid advance has been high-tempo, 24 hour, high-intensity mechanised operations. It was never clear that this solution was based on reality. In particular, the attempt to fashion the Indian Army into an instrument of high-speed manoeuvre warfare could break the Army and destroy its capabilities. True generalship lies in a thorough understanding of an army's limits and a willingness to accept them, not in trying to impose alien patterns because of current fashion.

A possible solution worth discussion is to employ very short-range air mobile penetrations combined with a forward thrust by the armour.

Even more than ours, the Pakistan Army is trained to fight in line. It has always been touchy about being outflanked; the merest hint this is in prospect causes it to recoil. Doubtless this tendency is aggravated by lack of territorial depth and inferiority in numbers and equipment.

Our helicopters assets are limited considering the width of the western and northern fronts : 35 gunships, 200 mediums, 10 heavies. With ruthless rationalisation, however, it might be possible to concentrate 20 gunships, 40 mediums and 4 heavies at one place, permitting a lift of an infantry battalion and an artillery battery at one go.

Airmobile operations ahead of our FEBA will be fraught with many dangers and the potential for great disasters. But if we limit our objective to a jump of, say, 30-40 km, many of the problems can be minimised. Under optimum conditions, three battalions/three batteries could be landed in 12 hours ; more likely two of each might be landed. Nonetheless, that suffices to outflank any Pakistani forward defence and enables, in turn, the armour to advance that distance in 24-48 hours. The shallowness of the penetration ensures that air and gunship support are readily available, that the bridgehead can be maintained and even reinforced, and that the armour does not have too difficult a task to accomplish.

Insofar as such an operation aims primarily at the mind of the opposing commander, it is difficult to predict the effect. But two such jumps on a corps axis should unravel the defence and permit the armour to be used in the 'expanding torrent' mode. In ten days the helicopter force should suffice to launch two such penetrations on each of two corps axes. Each penetration could be at a different site, or the second could jump off from the bridgehead created by the first.

Minor readjustments in the proposed pattern of helicopter purchases and deployments in the next 3 years could greatly enhance the chance of

success. The addition of 20 gunships, 6 heavies and 40 mediums to the force (the mediums are, in any case, already authorised) would enable landing of a stripped down brigade in a single lift. It would be necessary only to prevent the dispersal of the new acquisitions all over our battle fronts : they should be added to the central pool to support a newly formed airmobile brigade.

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Improving Military Leadership Potential : An Indian Experience

LT GEN (RETD) DR M L CHIBBER PVSM, AVSM, PhD

INTRODUCTION

This paper is based on experience of an organised attempt to improve the leadership potential of officers serving in the Indian Army. It was undertaken when I was commanding India's counter-offensive force of a Corps strength.

I was in the process of revising our plans to examine if better results could be achieved with the available force. I discussed some of my ideas with a cross-section of Commanders at various levels and was convinced that we could achieve more ambitious objectives if only we could improve the effectiveness of our leaders at various levels. The problem was how leadership could be improved. I undertook a study, in depth, of the whole leadership process to examine if it was at all possible to reprogramme human personality to be more inspiring and effective.

This paper deals with the following questions which emerged during this study and subsequent experiments :

- (a) What is leadership ?
- (b) Why is good leadership so rare ?
- (c) Is there a Universal Inner Structure of good leaders ? If so, what is it ?
- (d) Is there a way to improve human personality ? If so, what is it ?

WHAT IS LEADERSHIP ?

Leadership is one of the most difficult terms to define. While we instinctively know that, in any human group activity, there is a need for the guiding hand of a leader, yet when it comes to evolving a concrete definition or theory of leadership, the term becomes multi-dimensional. "If we know all too much about our leaders, we know far too little about leadership. Is it essentially inspiration ? Is a leader the definer of values ? Satisfier of needs ? If leaders require followers who leads whom from where to where and why ? How do leaders lead followers without being wholly led by followers ? Leadership is one of the most observed and least

Text of a paper presented by the author at the Biennial Meeting of the Inter-University Seminar on Armed Forces and Society (IUS) at Baltimore, Maryland, USA on 27-29 October, 1989.

understood phenomena on earth... A recent study turned up 130 definitions* of the word"¹.

Academically, all the questions raised by the author merit consideration. However, in this Paper we will confine ourselves to discussing the important questions listed above. These are questions related to the "innerman" in a leader. The style, skill and ultimately the effectiveness of a leader depend on the quality of this "innerman".

The definition which has the touch of practical common-sense is the one evolved by a medical doctor-Lord Moran. He was the regimental medical officer of a British Infantry Battalion during World War I. For two long years, he served on the battle-fields of France and observed how, week after week, the regimental leaders inspired their men to fight the Germans with utter disregard for their lives. He saw examples of great heroism and sacrifice as also demeaning cowardice ; he started analysing the impact of leaders on human beings. About two decades later, when the World War II broke out, he had by then risen to become the President of the British Medical Council and the personal physician to Sir Winston Churchill, the war time Prime Minister of Great Britain. In that position, he had a ring-side seat to watch the top leaders of the world - in politics, military and industry. Having seen leadership from both the ends of the spectrum, he coined a definition which reads as under :

"Leadership is the capacity to frame plans which will succeed and the faculty to persuade others to carry them out in the face of death"².

In the above definition each word is pregnant with meaning and should be carefully pondered over. Leadership has two parts. The first one is "The capacity to frame plans which will succeed" and in this part the emphasis really is on the word 'succeed'. It requires a complete grasp of the situation and environments by the leader because, without that, he cannot frame plans which will succeed. However, it is the second part "The faculty to persuade others to carry them out in the face of death" which is manifestly far more important ; at the same time, the more difficult part of leadership. This essence of leadership can also be expressed as under :

KNOWING WHAT TO DO + GETTING THINGS DONE

OR

CAPABILITY + EFFECTIVENESS

* By now there are over 500 definitions in the literature on leadership.

The two parts of leadership have different relative importance. Some studies show that the proposition is 12 per cent of the first and 88 per cent of the second. However, it is not really possible to give a mathematical value to such a complex totality of human personality. No one disagrees that getting things done is far more important for good leadership, because knowing what to do can quite easily be determined from advisers, consultants and so on.

WHY IS GOOD LEADERSHIP SO RARE ?

The reason why good leaders are so few and far between, is that the combination of qualities required is such that it is not easy to come about. Good leaders come in all shapes and hues - the flamboyant, the scholarly, the artistic, the ascetic, the gregarious and the recluse.

When one analyses what is common along all, irrespective of the region of the world they belong to, and the era of history in which they lived, good leaders who leave an impact after they are gone have two things in common. The first is that they are gentlemen in the true spirit of the word and secondly, they have a common inner hard core based on the foundation of the selflessness. Both these features merit discussion because there is paucity of men who have these strengths.

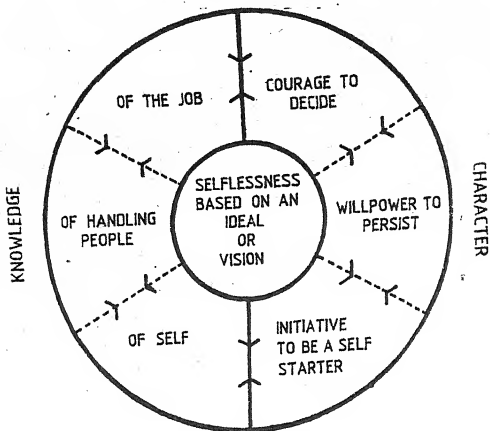
Every good leader fits into the definition of a gentleman which runs as under :

"An honest man, a man with a sense of duties and obligations of his position, whatever it may be; a man who tells the truth; a man who gives to others their due; a man considerate to the weak; a man who has principles and stands by them; a man who is not elated by good fortune, and not too depressed by bad; a man who is loyal, a man who can be trusted."³

UNIVERSAL INNER STRUCTURE OF GOOD LEADERS

The Universal truths which are common in the composite personality of all good leaders can be shown diagrammatically in a structure as in Chart 1.

UNIVERSAL INNER STRUCTURE OF GOOD LEADERS



SELFLESSNESS

The hub of the structure, its very foundation, of being unselfish is perhaps the most difficult part to acquire. The ability to overcome narrow self-interest can only be built in a human being by a variety of positive influences on him in the process of growth from early childhood - the influence of parents and family, the society, the school and college and the companions in a person's life. An ideal is the best instrument to help an individual to rise above self-interest. The ideal can be related to the good of the community, organisation, country or the world. The higher the ideal, bigger is the potential of a person for leadership.

Selflessness is the fountain-head of all the virtues contained in the definition of the word "gentleman". It is for this reason that in most military

organisations of the world, the officers are repeatedly told that "you must be a gentleman before being an officer".

Emphasis on selflessness sounds contradictory because ambition is often depicted as an essential ingredient for success. It is important to analyse this apparent paradox.

The German General Staff which managed the affairs of the German Armed Forces (Wehrmacht) has been regarded as the most efficient organisation ever created in any field of human activity. Its proof was that, even to the very bitter end of World War II, the cohesion in the German Army did not break down. One of the scholars, studying the German General Staff, asked Von Moltke about the various qualities which they look for, to have built such a magnificently efficient and effective group. The answer given by him was - "The first qualification has not been so much the possession of any quality as the absence of a quality - the quality of ambition. When with us, if an officer of the General Staff is a climber - well, we have no further use of him."⁴ This is the very same philosophy which has helped Indian civilization to survive for more than 5,000 years - the philosophy of "nishkamys karma" (Doing work without worrying about fruits of it).

The German General Staff had adopted the culture of getting rid of men motivated merely by ambition for personal advancement, because of their understanding of human nature. They were aware that such men are useful only in a limited way, but, as leaders, would be counter productive for the long term and sustained excellence of an organisation.

The dictionary meaning of ambition is "aspiration after success or advancement". The nature of ambitious persons has been analysed by Francis Bacon in the following words (meaning of some of the old English words are given in brackets) :

"Ambition is like choler (biliousness), which is a humour (disposition) that maketh men active, earnest, full of alacrity and stirring, if it be not stopped. But if it be stopped, and cannot have his way, it becometh adust (burnt up) and thereby malign and venomous. So ambitious men, if they find the way open for their rising, and still get forward, they are rather busy than dangerous; but, if they be checked for their desires, they become secretly discontent, and look upon men and matters, with an evil eye; and are best pleased, when things go backward; which is the worst property, in a servant of a prince or State."

Having explained the nature of ambitious men, Francis Bacon concludes that, ultimately, the greatest good is done by those who are "more sensible of duty than of rising."⁵

The credo of German General Staff sums up the whole approach to good leadership. It is - "TO BE THAN TO SEEM".

To build selflessness by an ideal or a vision, most armies give a credo to their officers. For example the West Point credo is :

"COUNTRY DUTY HONOUR"

The credo of the Indian Army is :

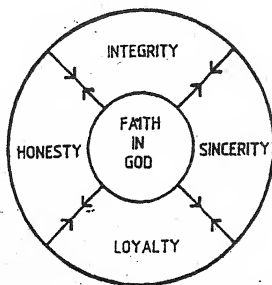
The Safety, Honour and Welfare of your country
come first always and everytime.

The Honour, Welfare and Comfort of the men
you command come next.

Your own Ease, Comfort and Safety come
last always and every time.

Selflessness is the source of all the noble and gentlemanly virtues in a man. A suitable structure of selflessness is depicted in the diagram below :

**SELFLESSNESS
COMPOSITION**



Throughout history, in all ethical writings, this quality in a leader has been explained at length by those who have left an imprint on human society for centuries. For example :

"As long as you are clouded over with this possessive attitude, thinking only of yourself, your family, your people, your things you can be certain that sooner or later you will be cast into sorrow. You must travel from the stage of identifying yourself with "I" and "mine" to the higher stage where you are constantly identifying yourself with "We" and "Ours". From selfishness you must gradually travel to selflessness, from bondage to liberation."

-- Gita (Discourse 15th by Sai Baba)

"True self-interest teaches selflessness. Heaven and Earth endure because they are not simply selfish but exist on behalf of all creations. The wise leader, knowing this, keeps egocentricity in check, and by doing so, becomes even more effective. Enlightened leadership is service not selfishness. The leader grows more and lasts longer by placing the well-being of all above the well-being of self alone."

- Lao Tzu (Tao of Leadership)

"Whosoever wishes to be the first among you shall be your servant.

- Jesus Christ

KNOWLEDGE AND CHARACTER

The structure of leadership depicted in the diagram has two parts. One is 'knowledge' and the other is 'character'. Knowledge equips a leader in knowing what to do and his character gives him the strength to get things done. Knowledge and character are complementary and lend support to each other. Mere knowledge without character makes a man indecisive. Mere character, not supported by knowledge, seriously limits the innate potential of a leader.

KNOWLEDGE OF JOB

Knowledge of the job gives strength to a leader as it is aptly said that "knowledge is power". It is, indeed, true that "A group of people can often be dominated by one person who sees most clearly".⁶ Consequently,

knowledge of the art of war at appropriate level is an important component of a military leader's effectiveness.

KNOWLEDGE OF HANDLING PEOPLE

The knowledge of handling people is by far the most important skill a good leader has to possess. All plans and projects in peace or in war, are executed by human beings. Unless a leader has the skill to handle this resource, he cannot become a good leader.

The statement that a good leader has to 'vary his style between the autocratic and the democratic depending on the changing situation he encounters and the changing group he leads' is the recognition of the three integral facets of human personality in Indian thought of Tamas (lazy, indolent and selfish), Rajas (active, ambitious for success), Satwa (harmonious and noble). Articulated in another way, a good leader knows what is the judicious mix - of personal example; persuasion and compulsion - that he has to use in any given situation. It is well to remember that a good leader acts intuitively and not by calculation. Unless he can be spontaneous the impact of a leader is considerably less. It is good to remember the meaning of intuition; it is "the power of the mind by which it immediately perceives the truth of things without reasoning or analysis." Intuition develops with training of the mind in the handling of people.

KNOWING PEOPLE

The starting point of the ability to handle people is to know them. A leader has to get down to it. It requires careful and deliberate allocation of time in our lives - working hours as well as non-working hours to study and understand the people, a leader has to deal with.

It is not easy to know the real person inside each individual. They are in a shell - cocooned in their self-perceptions and egos. There is a simple sentence which guides military leaders in the act of handling people - that is - "a good leader should know his men better than their mothers do, and care even more." This saying bears analysis as it is pregnant with meaning.

No one knows the nature of her children better than a mother. She has a full intuitive feel of their physical, emotional and spiritual needs. She knows their weaknesses and strengths. Her main concern - and very often the only concern - is to bring them up in such a manner that they are an asset to the family, the community, the country and the world at large. The clearer and higher the vision of a mother, the loftier is her effort to

influence and groom her children; with the intimate knowledge of their total personality, she knows which one will do the right thing merely by seeing her good example; which one will need a little pat on the back and, perhaps, a quiet chat; and, which one, now and then, needs the twisting of his ears. Be warned that "caring" does not mean "indulgence". In the handling of her children, the most pronounced factor which makes the children amenable to her guiding hand is the fact that she cares and that they trust her. She does not spare the rod when considered necessary. The same has to be the approach of a good leader. Once the people are convinced that he is the person who can be trusted and who genuinely cares for them, his attempts to inspire and motivate them for the goals and objectives of an organisation, become fully effective.

It may be appropriate, at this stage, to reiterate the importance of the foundation on which the structure of leadership stands. If this foundation is not based on selfless devotion to an ideal cause, and commitment to the objective of an organisation, it is not possible for a leader to be utterly genuine or selfless and generate trust among the men who work with him. Phonies do not inspire.

The ability to know people depends on the communication skill of a leader. Much has been theorised and written about this skill. It is relevant to discuss its essential features for this topic. Most of the strains and fractured relations can be traced to breakdown of communication between individuals or groups. One starts seeing only the ugly side of the other person, and it, thus, leads to alienation or estrangement. The ability to communicate, on the other hand, enables a person to see the good that is there in abundance in every human being. This ability has two sides :

(a) Skill of expression; and

(b) Skill of listening.

The skill of expression does not merely mean gift of the gab or cleverness with words. For a leader, expression skill is a vehicle to generate trust. Verbal words count for only 30 per cent in this skill. The other 70 per cent is the body language - expression in the eyes, the tone, the posture, the vibrations that a leader conveys. It is the total conveyance of a leader's personality. General K S Thimayya - a distinguished Chief of Indian Army - was one of the best examples of this truism. He literally "murdered" Hindustani when he spoke to soldiers. And yet, I have never come across a leader who could inspire men better than him.

In genuine communication, there can be no pretensions. Spontaneity, straight-forwardness and genuineness, are far more important than command over the language.

KNOWLEDGE OF SELF

To be a good leader an officer must understand his own personality. This is absolutely vital. Leadership is an interaction between the leader and the led. A good leader must know and understand both the parties.

Human tragedy is that each one of us feels that he is the epitome of perfection and refuses to look at himself objectively. There is a sound and noble core in each one. But it is coated with layers of ego, desires, greed, envy and anger of varying thickness. Deeply involved in these layers, we refuse even to realise that we may have some shortcomings. We blame others for being 'deceived', 'let down', 'done down', 'ignored', and so on. A good officer who understands his own personality is never afflicted by such self-created problems.

Objective knowledge of ones own strengths and weaknesses is the starting point for self development.

CHARACTER

Character has been defined as the sum total of an individual's personality. Various authors and scholars have tried to identify attributes which contribute to good leadership-Napoleon listed 90 attributes. However, the really important virtues which can be found in all good leaders are those that have been shown in the structure.

COURAGE

Courage is the most admired of human virtues in all societies - to be a man means to be courageous. The most important aspects of courage for a leader is to take decisions and to act. To take decision means being accountable for success or failure, but nothing happens or moves without decisions; hence, for a leader who is managing affairs at whatever level, the courage to decide and act is an essential attribute of his character.

WILL POWER

Will power to persist is the second essential trait of character which a good leader must possess. In the execution of any plan or project hundreds of difficulties arise, and failures occur on the part of people who have to execute a plan. Sometimes these failures are due to natural causes and insufficiencies; at others, due to deliberate mischief or pettiness. A good leader must have the determination to persist in spite of setbacks and obstacles that may arise in the fulfilment of his plan. To be able to overcome obstacles and difficulties require initiative, which is the third essential attribute of a good leader.

INITIATIVE

Initiative involves intelligent anticipation of events by thinking ahead and finding an alternative way to achieve if the chosen course of action gets blocked. In other words to be a self starter. It also involves seizing opportunities and openings which arise in any human activity and exploiting these openings for the successful execution of whatever a leader is involved in achieving.

HOW TO ENHANCE LEADERSHIP POTENTIAL

There is a perpetual debate on whether leaders are born or made. The best answer to this question is by asking a counter question. "Are Olympic athletes born or made?" The answer obviously is that no one can be a Olympian without having some athletic aptitude, and then developing that aptitude with intense training: same is the case with good leaders. Training is the most important aspect of development. Just as training can produce a large number of good athletes even though Olympians may be few, so also training can produce good leaders even though outstanding ones may be rare.

Since leadership is exercised by mind, it is the mind that has to be trained in optimising the qualities which add up to the total leadership potential. The conclusion of a well known psychologist, on this subject is:

"The would be leaders should study what is known about leadership and read the books on leadership. He should examine himself in respect of attributes of leadership which he learns about, try to adjust himself, first in behaviour and presently in thought, to the ideal attitudes. There is no doubt that wisdom, backed up by a desire to learn, can effect great changes in ability to lead other men."⁸

In India, we have a great heritage and experience of reprogramming and overhauling the human personality. The concept of "Sadhana" (Sanskrit word meaning "endeavour to get a particular result") is aimed at uplifting a person to higher values. There is a lucid explanation of this process by Swami Sivananda - the modern interpreter of the Indian heritage. He explains how, with effort, a man can be master of his destiny.

"You have got a particular way of writing in vertical way. This is prarabhda (inherited situation, condition or tendency). You can change that writing into slanting way. This is Purshartha (effort). Take care of your thoughts. Then actions will take care

of themselves. Action follows thought. You sow an action and reap a tendency. You sow a tendency and reap a habit. You sow a habit and reap a character. You sow your character and reap your destiny. Therefore, destiny is your own creation. If you change your habits you can become master of your destiny."⁹

In his teachings of management, Peter Drucker comes to a similar conclusion. "Self-development of the effective executive, is central to development of the organisation, whether it be a business, a government agency, a research laboratory, a hospital, or a military service. As executives work towards becoming effective they raise the performance level of the whole organisation. They raise the sights of people - their own as well as others."¹⁰ This process means "he has to learn a good many new work habits as he proceeds along his career, and he will occasionally have to unlearn some old work habits."¹¹ Self development really means developing "leadership - not the leadership of brilliance and genius, to be sure, but the much more modest yet enduring leadership of dedication, determination and serious purpose."¹²

Unfortunately, leadership, particularly its major component - EFFECTIVENESS, cannot be taught. It is an art which can be acquired only by self effort. Leadership is a function of interpersonal relations and not of organisational status. The question that arises is how an individual who wishes to develop his leadership should go about to train himself?

Drucker categorically asserts that effectiveness can be learnt and suggests - "Effectiveness, in other words is a habit - that is a complex of practices. And practices can always be learned... Practices one learns by practising and practising and practising again."¹³

My own experience in seven years of trials with military officers has been the same. I borrowed a technique used by Swami Sivananda of maintaining a diary of spiritual practices. I converted this into a self-development diary for use by those who wanted to improve their leadership potential. The format which was used by many is placed at Appendix 'A'. Its utility lies in making a self-assessment to determine the attributes which a person wishes to strengthen in himself or to eradicate traits or weaknesses which may be impeding his development into a good leader. A persistent self-examination, based on very objectively kept daily record of personal activities, brings about unimaginable improvements in a human being.

RESULTS ACHIEVED

During various trials conducted in a period of approximately seven

years, the main result was that anyone who persisted in self-development technique for a period of more than three months, did draw a benefit. However, those who persisted beyond three months, were never more than 20 per cent of the group that was enthused to undertake this technique of self improvement.

Initially, the low percentage of officers who persisted in self-improvement for a period of three months or more caused me disappointment. However, when I came across a sociological study on group behaviour I felt reassured.

Any group can be divided into three parts : one-third who are positive towards their organisation; one-third who are neutral and one-third who are negative. If the one-third positive group is strong enough to carry the neutral group with them, then that organisation does well and is effective. Organisations in which one-third negative group carries the neutral group with them, are beset with morale and effectiveness problems. Once I realised this natural phenomenon of behaviour in human groups, I was satisfied that 15 to 20 per cent officers who benefitted from self-development were reinforcing the positive group in their units and formations. This was confirmed by formation commanders who were involved in these trials and experiments.

A beneficial side-effect of the experiment was that those officers who persisted in practising self-development techniques beyond three months, not only became more effective as leaders but became happier as individuals. We analysed this phenomenon and concluded that the answer lay in the following equation of happiness which compresses the entire wisdom of the East :

$$\text{Happiness} = \frac{\text{Number of Desires Fulfilled}}{\text{Number of Desires Entertained}}$$

The crux of the matter is that anyone who has the will power to control his desires can have a very high quotient of happiness.

CONCLUSION

The quality of military leadership in any Army depends on the inputs by three parties -- the society and the State, the military organisation and the officers themselves. This input can be reduced to an equation of quality¹⁴ as under :

Input by Society and State	x	Input by Military Organisation	x	Input by Officers themselves	=	Quality of Officer Corps
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If any input is a zero, then the quality will also be a zero. This paper outlines a technique of self development by officers in an atmosphere of growth and development which is essential for such an undertaking. Formation commanders in the Indian Army who viewed the development of their officers as an essential part of their leadership responsibilities derived benefit from this technique in moving their units and formations towards excellence.

NOTES

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6. General Sir John Hacket in the *Profession of Arms*, page 219 Sidwick and Jackson London 1983
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APPENDIX 'A'

LEADERSHIP : SELF-DEVELOPMENT DIARY

Month _____

Sl. No.	1	2	3	4-31	REMARKS
1.	Time devoted to physical fitness.				
2.	Time devoted to professional study/acquiring professional skills.				
3.	Time devoted to study men under me and man-management.				
4.	Number of subordinates I have helped in their personal and professional development.				
5.	When I had the choice, how many times did I place the good of the organisation/country above my self-interest.				
6.	Number of times I had the courage to correct my subordinates' mistakes/indiscipline.				
7.	On how many occasions did I set a personal example to my subordinates.				
8.	Time wasted in fantasies of family, fortune and fame in the future or fretting about the past.				
9.	How many times I have been greatly angry, jealous, envious or hateful.				
10.	Number of acts of self-denial to build up my will power.				

NOTES :

1. Each individual is a unique personality. A little self-analysis will show the qualities that an individual may want to strengthen himself.
2. The list given here is only an example. While the first few series would generally stay for all, the rest would depend on the perception of each individual of his own strong and weak point. An individual who has mature self-knowledge is well set on the road to success.
3. Before going to bed, look back on the day and fill up the log : reflect how to better the score the next day. Take a fortnightly stock of your performance. A few months' persistence will bring about the desired change.

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The 21st Century Armed Forces Officer

MAJ GEN VK MADHOK (RETD)

When every one's way of thinking is being influenced by the everopenening environment, would it also affect the professional officer ? Or will he continue to remain isolated, wedded to his regiment, a bearer of tradition, an executor, of orders and entirely governed by the DSR (Defence Services Regulations), framed by the British in the 18th and 19th centuries and to which very little has been added after independence. Or the end of this decade will see an officer who is much less regimented, questioning, not necessarily apolitical, part bureaucrat and more erudite then his predecessors! The answers to such speculation lie in the current and environmental forces of the nineties. Besides, such questions are relevant in view of a horde of controversies which rage now and then and which are continuously debated in the newspapers.

The concept of professional soldiering itself is facing flak from new patterns of education and technology which give far more opportunities to accumulate degrees and qualify for diverse vocational avenues, an information revolution, glasnost and the opening society, mounting family pressures, the plight of ex-servicemen trying to fend for themselves and the individual perception of freedom versus discipline. We already have the example of an ex COAS speaking up against the authorities last year, a distinct departure from traditional propriety. Such type of reactions have made it so difficult in Europe and other advanced countries to find full time professional soldiers. The youth is hesitant to trade freedom with too many rules and regulations in peace. Selective conscription with increased emphasis on part-time soldiering, has therefore become the norm - a pattern which will force itself on us by the late nineties if not earlier.

A major change which can therefore be anticipated is that most of the Officers may not like to serve full tenures as professionals, and sidestep to a civil job immediately on supersession or on earning minimum pension, most likely retaining their lien on the panel of Reservists or as Territorials. Professional hard corps of officers as such could face serious shortages currently being felt in the Medical Corps and technical arms where the doctors and qualified technicians are so eager to move on to a more remunerative job in the civil as soon as they can.

A sad casualty is the concept of being an officer and a gentleman. It was a professional necessity but already stands bruised and badly eroded. For this the blame can be shared by the political masters, bureaucracy and the environment itself. The officer has been left with a feeling that a gentleman is a misfit in today's society and cannot survive. The term professional itself is facing a challenge. The chief pre-requisite for its

development, the isolation of the military from the civil is no longer practical. An isolated professional in any case is overtaken by his environment - a fact which a soldier discovers on becoming an ex-serviceman. As regards some of the environmental forces which will exert in shaping the new officer, we could examine the following.

GLASNOST

The professional officer's upbringing and conditioning are based on the norms and tenets laid down in the DSR. His elevation in service depends on scoring well in the restricted number of qualities listed in the ACR (Annual Confidential Report) form. If he scores well he gets promoted otherwise he stagnates. The promotion system itself is being increasingly debated and termed as closed and isolated. In an opening society, the individual wants to be a partner in his career development. Unfortunately, a soldier's environment is a fixed one and closed right from recruitment tests, rank structure, promotion examinations, dress regulations, parade hours, leave and sickness rules and even the length and type of moustache he can keep. And wherever there are gaps, intermittent hierarchical structures ensure that these gaps are covered with local orders. The soldier thus has to function within brackets. In this milieu, innovation, initiative and enterprise suffer. The first wave of glasnost, clashing with an environment based on the colonial model can therefore be seen. While a military system cannot open-up too much, but the individual wants more freedom.

FAMILY PRESSURES

The contribution made by a soldier's family has been under-estimated and taken for granted. The non-complaining separated family at home has been his sheet-anchor and biggest asset. It has enabled him to bear long tenures in desolate, high altitude or non-congenial areas cheerfully. Some wives have spent nearly fifty percent of their married lives without their spouses and brought up children. This situation will change as separated families, themselves are not finding it easy to contend with their immediate environmental problems. With uneasiness at home, an officer's task will be difficult. An army of our size on the other hand just cannot find too many slots in peace stations. The Government will have little option but to curtail rotational tenure of units and officers in field areas eventually cutting these down to one year or even six months. We can also see an increasing demand for locally recruited Territorial army units. Admittedly this is an infantry problem but then the infantry forms three fourths of the Army. Coupled with shortage of accommodation in peace stations, rules and regulations, the second wave of family pressures can be seen exerting on the officer to quit for a more stable even a less remunerative job no sooner the pressure becomes unbearable.

PLIGHT OF EX-SERVICEMEN

The society has not treated its ex-servicemen sympathetically. It is not realised that an ex-serviceman falls in a conditioned category and who is trained in and for an entirely different environment. He needs psychological re-orientation to fit in a civil society which takes time. Throughout his service, a soldier is attuned to work by a fixed time schedule. This is not so in the civil. An ex-serviceman, therefore, feels disheartened when his work cannot be done in time by the civil departments. Also many programmes announced for resettlement by the states or the central Government have remained on paper. This is, therefore, the third wave clashing against the psyche of a serving officer. And unlike his predecessors in the olden days, who waited for favourable offer to turn up on retirement, the 21st century officer will prepare himself for an alternative occupation far ahead of his release date. And just as he earns his minimum pension, we can see him shifting to a new vocation.

OPENING OPPORTUNITIES

The ever expanding mass media, correspondence courses, TV, radio, self-education cassettes together with an information revolution have opened up vast opportunities. Fortunately, no one is better qualified to make use of these than the professional officer. With a set routine, no labour trouble, availability of practically everything on a plate, he has a lot of time at his disposal. And he would learn to make use of this to add qualifications and widen his horizons. We can already witness this phenomena where NCOs (Non-Commissioned Officers) are obtaining degrees by correspondence courses.

CONCLUSION

One can see the continuous process of evolution and so it would be in future. The Cavalry officer of yesteryears rode on a horse, today he handles a sophisticated tank and in the next four to five years, he would be piloting an armoured helicopter. The officer of 2010 would look at the present generation as if they lived in the stone age. Just as we are inclined to think of our predecessors in the days of the Mutiny. Such are the processes of history. The future history indicates that of all the professions, it will be the 21st century armed forces officer who will be far better placed than any one to make use of his environment. Due to invisible but sure environmental forces he would train himself for multi-roles to fit in as a bureaucrat, a politician, in business or in a vocation of his calling and probably leave the service by the time he turns forty having earned his minimum pension.

Is the Non-Aligned Movement Relevant ?

LT GEN EA VAS PVSM (RETD)

F Fukuyama, in a provocative article entitled "The End of History ?" claimed that the West has won the war of ideas, firstly, by convincing almost all nations that its concepts of freedom and equality are true ; and secondly, by destroying the intellectual and political foundations of alternative understandings of justice. He underlined that the triumph of Western ideas will see a decline of inter-state conflicts in the developed world. He recognised the persistence of war and poverty in the Third World, parts of which would remain mired in conflict. But he dismissed this as irrelevant since a Lesser Developed Country (LDC) would not influence the great nations which are stepping out of history.

Whether one agrees with Fukuyama or not, few will dispute the fact that Russia and Eastern Europe will never be the same in the post-Gorbachev era. State Communism is in retreat in Europe, though this does not mean that the ideology of Communism is dead or that liberal democracy of the Western Variety is the only alternative available to Russia, Eastern Europe and the non-Western World. Nevertheless, something very fundamental is happening in world history, and the time has come for us to ask : What will be the impact of these changes on India's security and on the Non-Alignment Movement (NAM) ?

NON-ALIGNMENT

After the second World War, the political allegiance of the liberated colonies and other LDCs became an objective in the struggle for domination between the two super-powers. Attempts by LDCs to remain neutral or non-aligned, as also their efforts at national consolidation and economic development, became aspects of the Cold War. Thus, non-alignment emerged as an area of independence and diplomatic peace between two camps opposed to each other. The wide-spread belief that Nehru was the originator of the entire concept of non-alignment is by no means contradictory to his modest disclaimer that he did not originate the policy but only gave voice to what was inherent in India's circumstances. Non-alignment started as India's national strategy, then became a common strategy for Egypt, Yugoslavia and India, and soon transformed into a global movement.

The main criteria for membership in NAM was a commitment not to get involved in great power military pacts and rivalries. Yet, non-alignment was looked upon by different people at various times in a differing light. A few rejected it as a cowardly evasion; some looked upon it as a desperate expediency ; many viewed it as neither good nor bad, but something to

which no reasonable objection could be taken ; others looked upto it as an inherently good thing - a badge of rectitude for all LDCs. But whichever way one looked at it, NAM was the creation and outcome of the Cold War between the super-powers. Now that the Cold War has ended and the two opposing camps are disappearing, can there be any justification for NAM ?

DANGER OF CONFLICT

Some strategists warn against the seductive charm of Fukuyama's article. The long peace that has followed World War II is the direct outcome of nuclear deterrence. The nuclear factor entails two dangers to the very peace it has helped to create. The first is the possibility of an irrational war which would be the most destructive in history, or could even end it in a more radical sense than Fukuyama's article. The second is the growing allergy to nuclear weapons entailing the possibility of nuclear-free zones being created in crucial regions of Europe and Asia. These two factors lead to a third; the decline of nuclear deterrence creates the risk of making some regions of the world safe for conventional war, and ultimately for nuclear war through uncontrolled escalation. World peace is far more fragile than indicated by the breaking down of the Berlin Wall.

World peace is also threatened by economic and ideological factors. The USA may not look upon the Soviet Union as a military challenge in the coming decade, but is likely to use all its power to contain the growing economic challenges of Japan and a unified Germany ; will that "conflict" be peaceful ? Apart from this, the values of the developed world can be threatened from outside. Neither Russia, nor the revived nations of Eastern Europe, nor China, nor any of the LDCs are likely to succeed in the near future, in emulating the West's democratic freedom or its capitalistic prosperity, even though they may desire this. Failing to achieve this at home, dissatisfied citizens will increasingly try to find them in the West, which is as incapable of integrating millions of potential immigrants, as it is of creating sufficient freedom and prosperity in the home countries to tempt potential immigrants to want to stay there. The influx of people from eastern into western Germany, Russian Jews to Israel, and the boat people sailing to Hong Kong, (and nearer home, Nepalis, Bangladeshis and Sri Lankans to India) are trends that can escalate.

IMPLICATIONS FOR INDIA

Whatever way we may see the future threats to world peace, we are forced to admit that though mankind is not yet rid of violence, Gorbachev has at least deprived the world of two opposing power blocs. The US is at a loss to find an adversary which would justify a huge defence budget.

The World's Communist parties are also being battered by glasnost. And NAM has lost the rationale for its existence. The US is no longer compelled to give anti-Soviet military aid to Pakistan, even though in order to safeguard its perceived interests in the near East, it may desire to play a role in Pakistan's internal affairs. Therefore, the US may now take a more realistic view of India's role in South Asia. India's relationship with the USSR will hereafter be less guided by strategic compulsions of its political support. These considerations will foster healthier bonds of cooperation with the superpowers and facilitate our access to sophisticated technology from the USA, Europe and Japan. A relaxed Sino-Soviet environment may better enable the Soviet Union to influence China which has already shown restraint by not criticising our policies in Nepal, Sri Lanka, the Maldives and J & K. Significantly, Pakistan has not been able to whip up international support for its stand on J & K, not even in Muslim countries other than in Iran. The US has stated that it is opposed to a plebiscite in J&K. President Gorbachev and President Bush at their summit meeting in June 1990 upheld the Simla agreement and urged Pakistan and India to deal with their problem peacefully.

Pakistan knows that war with India will be pointless if not suicidal. It has therefore adopted the tactics of covertly fuelling violent unrest within India in J&K and Punjab. It hopes to bring unbearable pressure on India's security forces, build up international opinion against India, compel it to open negotiations on J&K, and also avoid the risk of an open war. India can either attempt to deal with Pakistani-aided terrorists by confining its counter-terrorist efforts within the victim states, or attack guerrilla bases in Pakistan or in occupied Kashmir, and thereby risk provoking another Indo-Pak war. Either way, one may justifiably ask : must India and Pakistan conform to Fukuyama's pessimistic predictions and continue to "remain mired in conflict" ? Regrettably, the answer is "yes", until both countries come to realise that this decade will find them topping the list of LDCs with the most illiterates and people below the poverty line ; under those circumstances, it would be absurd for either country to entertain military pretensions. Given our situation, Clausewitz's famous dictum about war being "a mere continuation of policy by other means" is a grotesque mockery of reality.

Undoubtedly, arms control agreements and the demilitarization of disputed borders could replace Indo-Pak military confrontations ; new political initiatives in J&K on the Line of Actual Control and in Siachen are not impossible provided both disputants are willing to get rid of obsolete views of the past. But it takes two to make an agreement ; such moves can only work if democracy survives in Pakistan, because history proves that democratic nations never go to war with one another. Ms Bhutto may

represent a revival of democracy in Pakistan, but currently, there is violence in Karachi and unrest in Sind ; added to this are the presence of fundamentalist mullahs, a powerful president, an ambitious ISI and a Punjabi-dominated army. These domestic compulsions restrict Ms. Bhutto's options and reflect Pakistan's political instability. India therefore cannot relax its guard ; this necessitates a continuation of military preparedness.

THE FUTURE

The founders of NAM had never looked upon it as a bloc ; this is why NAM has never had a permanent secretariat. Anyway, NAM is not concerned with issues which can only be resolved through bilateral agreements ; it has also lost its relevance from the point of view of influencing international issues between two non-existent power blocs. The validity of these changed circumstances was apparent when NATO's supreme military headquarters announced that the Warsaw Pact is no longer a military threat. (A Soviet spokesman responded by stating that the acronym NATO now stood for "Navy Aircraft Tanks Obsolete"). Thus the proclamation by the NAM Foreign ministers who met for a special session at the UN in April 1990, that "the disappearance of East-West bloc politics does not affect NAM's objectives or its role and relevance" was seen more as a brave attempt to justify the past rather than to uphold logic. Perhaps the Indian External Affairs Minister, Mr. I.K. Gujral was more realistic when, whilst concluding that sessions, he said "one might suggest that the original impetus of NAM was the existence of power blocs, but it should be recognized that the movement was a movement for independence of developing countries; political and economic."

Obviously, NAM is not only being forced to accept the irrelevancy of the non-alignment aspects of the movement, but also to face up to new challenges. This dismemberment of the Warsaw Pact, the unravelling of the Soviet empire, and the proposed establishment of a single European market in 1992 could spell economic catastrophe for LDCs. The introduction of new environmental and consumer standards in the developed world will add to the problems. The significance of these pressures found expression at the first summit of fifteen non-aligned and developing countries, termed as G-15 which was held at Kuala Lumpur on 1 June.* G-15 denounced the developed countries for the bankruptcy of the Third World, and the emergence of a new kind of imperialism in which pressure-groups of non-governmental organisations in the West were so powerful and financially strong that it was usually beyond the capacity of most of the LDCs to resist or counter those forces.

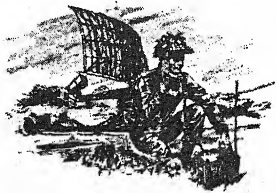
* G-15 is composed of : Argentina, Algeria, Brazil, Egypt, India, Indonesia, Jamaica, Malaysia, Mexico, Nigeria, Peru, Senegal, Venezuela, Yugoslavia, Zimbabwe.

Undoubtedly, G-15 will satisfy a need felt by developing countries. It is also necessary to devise effective methods of South-South cooperation. Summit leaders expressed their collective political will to convert their informal association into an action group that would endeavour to coordinate the position of the diverse countries of the South so that a meaningful dialogue could be conducted with the North on issues of trade, tariff, development and debt. The Summit favoured the setting-up of a permanent secretariat to institutionalise G-15 and formulate a more cohesive approach in the fight against the developed world to secure justice in international economic relations. On cooperative endeavour, several major projects of economic significance were approved. The three that were to be implemented immediately are a data exchange centre on investment and trade opportunities in the South, a forum for business and investment, and a mechanism to enhance the capability of food production and to tackle the population problem.

The Indian Prime Minister, whilst answering a specific question on conclusion of the Summit, said that G-15 was not setting itself up politically as "a small elitist group that is contrary to NAM". But despite this disclaimer, the wheel of history keeps turning slowly. Nehru ushered in the birth of NAM. Will V.P. Singh preside over its demise ?

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R. S. SHANMUGESAN

India's Maritime Strategy for the 90's

LT SANJAY J SINGH (IN)

In turning back the pages of history, Indian naval exploits can be traced far into the vedic ages, when India was even considered to be the 'Queen of the Eastern Seas' - a time, incidentally, when the forefathers of the western nations were still engaged in the process of forming society. While several volumes of history have been filled since then, the 'queen' lost touch with its maritime traditions, and India's naval development correspondingly suffered. Indian military philosophy, which is essentially land oriented and relies upon the strategy of defensive defence, has further restricted the growth of the Indian Navy. As a result, when India faced the threat of western imperialism from the late 15th century onwards, it lacked the maritime capability required to keep the western invaders from its shores and consequently had to accept their intrusion. This led subsequently to India's subjugation to alien rule for two centuries, and to foreign influence and control in our internal affairs for more than twice that period.

India's maritime traditions have survived over the years, but only through various coastal navies. While the Chola, Zamorin and Maratha navies remain the forerunners of the modern Indian Navy, the latter is also linked to the British Indian Navies, viz *Bombay Marine* (1613), *Royal Indian Marine* (1914) and the *Royal Indian Navy* (1934). But it was finally on July 22, 1957, when the Navy Bill was piloted in the Lok Sabha that India formally proclaimed its re-emergence as a maritime state.¹

In all these years the role of the navy has remained essentially the same, with progress and advances in technology only increasing its purview. Thus the navy is responsible for the following :-

- Protection of the mainland and island territories from seaborne attack,
- Protection of the Exclusive Economic Zone (EEZ) and offshore assets,
- Protection of own sea lanes of trade and communication,
- Safeguarding the state from coercive or 'gunboat' diplomacy, and
- Safeguarding national interests in contiguous waters.

Unfortunately, India has largely ignored the lessons of history and the tenets of maritime security, whereby our maritime forces have remained short of the strength required to fulfil this unchanging role passed down

the ages. It was primarily due to this failure that the US Task Force 74 could sail into the Bay of Bengal, in an attempt towards gunboat diplomacy, in December 1971.

In the nearly two decades following this incident the Indian Ocean region has also witnessed a growing militarisation, primarily by extra-regional powers who have employed their forces frequently and at will in pursuit of coercive diplomacy. With the growing economic importance of the seas, the deteriorating security environment in the Indian Ocean region, and the strategic value of this region to both the developing and the developed world, it is imperative for India to reassess the maritime strength required by it for fulfilling its security considerations. It is significant that despite having a coastline which is more than half of the nation's land frontiers, the Indian Navy has *less than five percent* of the manpower strength of the Indian Army. In the formulation of a viable maritime strategy, we need to consider three main aspects : the area to be safeguarded, the nature and source of threat, and its implication in the pursuit of our national objectives.

The area to be safeguarded in India's context is vast, with numerous and widespread areas of economic/military importance. India possesses a coastline extending over 7,500 km (including the mainland and island territories), with 10 major 20 intermediate and 150 minor ports. Over 97 per cent of India's trade is borne across the seas, with India's own merchant marine standing at about 5.7 million GRT last year and comprising of nearly 400 ships. India's EEZ covers more than 2 million sq.km. While only a small part of this has been exploited as yet, India is already fairly dependent on it : around 50 per cent of our oil needs and 80 per cent of our gas requirements are met from our off-shore assets. Another 30 per cent of the oil comes from across the seas, principally from the Persian Gulf region. On the mainland, also, there are a large number of economic and militarily significant targets which are vulnerable to seaborne attack : the population and commercial centres like Bombay and Madras, Bhabha Atomic Research Centre, Tarapore and Kalpakkam Power stations, oil refineries, etc.

India's island territories include 32 islands in the Lakshadweep Group (Arabian Sea) and 319 islands in the Andaman and Nicobar group (Bay of Bengal). If a number of named and unnamed rocks and islets are included, the total figure would rise to 588. While the nearest island in the Andaman Group lies over 1,000 km from the Indian mainland, there are islands in this group which are at a distance of 190 km from Burma, and others which lie 146.5 km from Indonesia. Due to the vast area involved, the task of safeguarding the nation's territorial integrity and maritime interests is also enormous. In considering the second aspect of maritime strategy, a Utopian might enquire the source of the threat to the above and

consequently to our freedom to pursue progress. But, the present security environment in the Indian Ocean region does not lend itself to such luxury of thought. At the same time, it would be unwise to formulate a maritime strategy merely on the basis of the present security considerations and threats from any specific nation. A viable and credible strategy would be one which could cater to the entire gamut of threat possibilities, keeping in view the present international environment and regional security considerations, as also the inviolable nature of changing international equations and the security consideration which would thereby arise. This would then enable the nation to develop its forces in an economic and effective way, while meeting all present and future possible security commitments. Such a strategy is particularly imperative for the Navy since maritime forces require a longer lead time for development. Consequently, they cannot respond to "crisis management" as in the case of other forces in the eventuality that the nation finds itself enveloped in an environment where the security commitments lie beyond the scope of its existing defence forces. We must arrive, therefore, at a maritime strategy which can furnish within its framework the development of our maritime forces such that the state is assured of its territorial integrity and the safe-guarding of its maritime interests at all times. Only then would it really contribute towards the attaining of our national objectives by providing the environment required for socio-economic progress.

In appreciating the relation between a credible maritime strategy and attaining of national objectives, we merely have to recall our own history. Any nation aspiring for progress needs a stable security environment, which cannot be provided unless the nation possesses a credible and effective maritime strategy. Our country is heavily dependent on energy, especially for industrialisation and development. India's energy needs are met to a large extent from its offshore assets. The nation's dependence on its offshore assets can be judged by the fact that, at current prices, the output tantamount of Bombay High alone is to 8000 crores per annum.² The economic consequences of disruption of this production for even a short time can be well imagined. A large portion of our oil needs are also met from the Persian Gulf region, with our sea lanes lying abeam Pakistan. Any threat to our sea lanes of communication, to our off-shore assets or to our very territorial integrity and land based economic centres would be inimical to our progress. The realities of the present environment cannot be ignored : by virtue of its geographical position Pakistan is literally sitting across our sea lanes to the Gulf, which confers on it the ability to interdict these with even a small force. The increase in tension between India and Pakistan in recent months is also no cause for comfort. And particularly significant is the steady build-up by Pakistan of its maritime strike potential. According

to published sources,³ Pakistan possesses/is due to acquire the following maritime strike aircraft (also see Table 1) :-

- 6 P 3Cs, with Harpoon ASMs
- 4 Atlantic, with *Exocet* ASMs
- 12 Mirage 5s, with *Exocet* ASMs
- 8 Fokker MR, with *Exocet* ASMs
- 6 Sea King Helicopters, with *Exocet* ASMs

To this may be added the back up force of 68 Mirage III's (including 50 from Australia), 46 Mirage 5s and 112 F-16s. Further, Pakistan's intentions can be estimated by its proliferation of coastal air bases in recent years. In addition to Karachi, these include Nauripur, Pasni, Jiwani and Gawadar. By mid-1990s Pakistan could have the largest aerial maritime strike force in the whole of the Indian Ocean littoral.

While India's maritime strategy aims to be purely defensive in nature, it is instructive to note that Japan, a purely maritime nation with the policy of developing its forces in a defensive posture articulated in its very constitution, has recently extended its maritime defence zone to 1,000 n.m. (1,800 km) from its coast.

In India's context therefore it is proposed that our maritime strategy, in order to provide a credible defence at minimum cost, must encompass three zones of defence.

ZONES OF DEFENCE

The maritime forces of India comprise of the Indian Navy, Air-Force units employed in maritime interdiction and air defence roles, and the Coast Guard. In the 90's these should aim for operating in the following zones of defence (also see figure 1).

- *zone of positive control* extending upto 500 km from the coast;
- *zone of medium control* extending from 500 to 1000 km from the coast; and
- *zone of soft control* encompassing the rest of the Indian Ocean. These zones are based on the principle of engaging a weapon platform before it can bring our vital assets within range of its

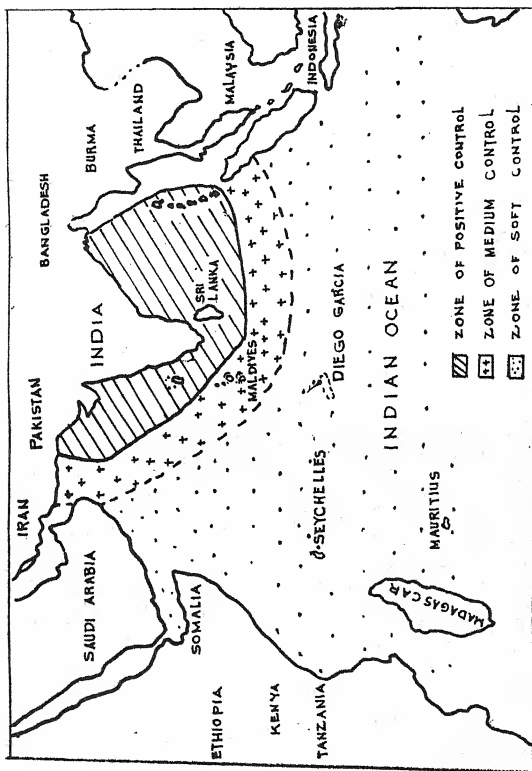


FIGURE 1 : INDIA'S MARITIME ZONES OF DEFENCE

weapons of destruction, or endanger our sea lanes of communication.

Given the fundamental national policies, the developmental imperatives and the limited resources of the nation, India cannot develop a capability for safeguarding its interests/shipping beyond the waters of the Indian Ocean, and must rely on purely diplomatic efforts, unsupported by maritime potential, towards this end for some years to come. But in the coming decade India must at least satisfy its major security needs in these three zones of defence.

ZONE OF POSITIVE CONTROL

The EEZ extends upto 200 n.m from the coast. On our east coast this may extend even further once the survey of the continental shelf is completed, owing to the clause regarding continental shelves in delineating a nation's EEZ. There exist, therefore, present and potential economic and militarily attractive targets not only on our coast or even inland, but all over our EEZ - stretching across 2 million sq. km of sea. Besides protecting the vital installations within the EEZ, the EEZ itself needs to be safeguarded from economic exploitation by other nations, and actors. Towards this end India's maritime forces must be able to sanitise the area extending upto 500 km from the coast. Within this zone India must possess a total force projection capability at sea, and exercise positive *sea control and sea denial*.

The first requirement for this is an effective surveillance capability over the entire zone. The threat to our ports, and inland and off-shore assets, could emanate from mines, and air, surface and submarine launched missiles and weapons. For the threat to be effectively countered, the weapon platform must be detected, acquired and engaged prior to its coming within launch range of the target. In the first zone (of positive control) the needs of surveillance can be met by long range coastal radar stations and airborne surveillance. According to the *Military Balance 1989-90* of the International Institute for Strategic Studies, London, the Indian Navy possesses 17 aircraft employed in maritime surveillance role. This figure is totally inadequate for providing surveillance cover over the two million plus sq km of the primary zone, let alone meeting corresponding needs in the next two zones of defence. India needs to urgently expand its inventory of maritime surveillance aircraft for meeting the requirements of surveillance over its territorial waters and EEZ.

The imperatives of attaining positive sea control comprise command of the sea, and consequently command of the air above and the waters below it. Control of the air in this zone can be achieved by employing a sufficient force of maritime strike and air superiority aircraft armed with

anti-air and anti-ship missiles, and possessing a radius of operation of not less than 1,000 km. This would be a strong deterrent to air and surface intrusion in our waters and EEZ, and would provide an effective counter-measure in case of such intrusion. Presently India has only 8 Jaguar aircraft designated for a maritime strike role⁴. It is not certain how much effort the IAF can spare for maritime air to air warfare, but the available force will remain insufficient for attaining air superiority in this vast zone and will need to be increased substantially (the maritime strike force by about four to six times) if the above aim is to be realised. It is interesting to note that India's aerial maritime strike capability is presently amongst the lowest on the Indian Ocean littoral, as can be seen from Table 1.

Table 1

**Airborne Maritime Strike Capability on the Indian Ocean littoral
(in descending order of combat potential)**

<i>Country</i>	<i>Aircraft</i>	<i>ASM</i>
1. Australia	20 P-3 C	AGM-84 Harpoon
	57 F-18	AGM-84 Harpoon, AGM-65 Maverick
2. Pakistan	23 F-III C	AGM-84 Harpoon
	6 P-3 C	AGM-84 Harpoon
	4 Atlantic	AM-39 Exocet
	12 Mirage V	AM-39 Exocet
	8 Fokker F-27	AM-39 Exocet
	6 Sea King	AM-39 Exocet
3. Iraq	72 Mirage F-I EQ 5	AM-39 Exocet
	6 SA 321 H Super Frelon	AM-39 Exocet
	6 SA 365 F Dauphin 2	AS 15 TT
4. Egypt	12 TU-16	Kangaroo, Kitchen
5. New Zealand	8 P-3 K Orion	AGM-65 Maverick
6. India	8 Jaguar	Sea Eagle

Sources :- IISS Military Balance 1989-90

Jane's Fighting Ships 1990-91

Jane's All the World's Aircraft 1989-90

Given the mantle of air cover, command of the sea itself can be achieved in this zone by a flotilla of Fast Attack Craft (FAC)/light frigates armed with Anti-ship Missiles, and augmented by shore-based SSM's (Surface to Surface Missiles). In order to provide adequate cover to our important ports and numerous economic/military targets, a *minimum* of two such

flotillas (one for each sea board) comprising of about 25 missile corvettes/light frigates each would be required, with a back-up force of not less than 40 OPV's (off-shore patrol vessels) respectively for the minor and intermediate ports, considering the large number of potential targets to be safeguarded and the vast distances between them. This would also preclude any major concentration of forces at any one point. Since the speed and range of hostile action have increased exponentially due to advances in technology, any such concentration of forces would render that entire sea board vulnerable. Consequently, this may necessitate the development of several more bases to ensure requisite dispersion of forces. On examining the present force level of the Indian Navy (see Table 2), comprising of merely 21 missile FAC/corvettes and 13 other inshore patrol vessels, it is apparent that their strength is far short of the level required for safeguarding the zone. India has recently developed a surface to surface missile of range 240 km, the Prithvi. This should be developed further and mounted on mobile units for deployment along the coast, to provide a more effective surface cover over the zone of positive control.

Command of the undersea is a more difficult proposition owing to the problem inherent in detection and tracking of a submarine. The submarine threat is compounded by their graduation from using torpedoes to employing conventional/nuclear missiles as their main weapon. China is known to possess SLBM's with a range of 3,300 km, while Pakistan's six submarines (4 Daphne and 2 Agosta) are fitted with Harpoon anti-ship missiles with a range of 130 km.⁵ India's ASW (Anti Submarine Warfare) capability needs to be correspondingly built up to a distance at sea where our vital targets would be safe from submarine launched missiles. The increasing range of such missiles against the limited means of the nation however preclude this capability from being extended beyond the second zone of defence for the next decade, at least.

It is pertinent to recall here that submarines are also the most effective layers of mines. A successful mining of our ports would result in immense economic loss to the nation, particularly in the case of major ports like Bombay (out of the nearly 140 million tons of cargo handled by our ports in 1986-87, Bombay alone accounted for some 30 million tons - over 20 per cent of the gross).⁶ It is imperative, therefore, to render our ASW potential in the first zone sufficiently strong to make intrusion by hostile submarines unprofitable.

The area demanding greater effort is that of development of our submarine detection capability. In this regard consideration should be given to the development of undersea sensors, which could be placed on the

seabed, along the approaches to our vital targets. Airborne and surface ASW potential can be strengthened by using light ASW frigates augmented by ASW aircraft and/or Helicopters. These would be required in sufficient force to enable placing an effective ASW envelope over the entire danger zone for our vital ports and targets vis-a-vis submarine launched missiles and mines.

Correspondingly, there is a need to provide AMD (Anti Missile Defence) to our more vulnerable economic/military targets. This could be met by positioning high resolution radars on site, and CIWS (Close in Weapon System) including guns and shoulder fired SAM's (Surface to Air Missiles).

The task of sweeping the waters of our major ports and keeping them clear of mines is a considerable one, necessitating the use of a large number of dedicated minesweeping vessels. India has a total of 20 minesweepers which does not allow for effective mine-clearance of even the principal harbours and their approaches.⁷ In order to keep these free for navigation, regular minesweeping operations would be required in these waters, which in turn can be met only by a force comprising of 10-12 squadrons, each with 6-8 ocean-going minesweepers, or alternately half this number of minesweeping helicopters.⁸ Acquisition/development of these minesweeping units should be progressed in the 90s.

Table 2

Principal Combatants - Indian Navy

1.	Submarines	15
2.	Aircraft Carriers (Medium)	02
3.	Destroyers	05
4.	Frigates	19
5.	Corvettes/Missile Craft	21
6.	Patrol, inshore	13
7.	Minesweepers	20
8.	Landing Ships	09

Sources :- IISS Military Balance, 1989-90

Jane's Fighting Ships 1990-91

India possesses a total of 588 islands, the majority lying over 1,000 km from the mainland. In the eventuality of one or more of these islands being invaded* or used as bases for economic exploitation of our EEZ/ island territories, India should possess the amphibious capability commensurate with the task of removing such unwarranted presence. Presently, the Indian Navy has 9 Landing Ships, with a gross carrying capacity of 1320 troops if all ships are deployed together.⁹ In real terms, however, this figure would be greatly reduced owing to logistic/operational needs of a force carrying out an amphibious operation. Evidently, with its present capability, the Indian Navy can barely support a modern Battalion sized force in an amphibious operation ! The situation is patently untenable in view of our numerous and widespread island territories and must be redcmced urgently.

In developing our amphibious capability due consideration must be given to the nature and gradient of the coast in the areas where we may need to conduct defensive amphibious operations. While the islands in the Lakshadweep group possess a predominantly sandy coastline, beaching operations in the Andaman and Nicobar islands would be severely restricted due to the coral reefs and rocky coastlines prevalent there. On these islands the beaching points, if any, can be easily identified and defended, which would make any amphibious landing against opposition a very costly affair, if not totally un-feasible. This simple geographical fact has major security implications considering that over 80 per cent of our island territories lie in the Andaman and Nicobar group, at distances varying between 1,000 to 1,600 km from the mainland.

In substance, therefore, our amphibious force must comprise of vessels which are relatively unaffected by the nature of gradient or bottom in the performance of their role. This could take the form of Large Landing Ships carrying their own high-speed shallow draught LCA's (Landing Craft Assault), and which could resort thereby to *stand off beaching*, and the employment of Hovercraft in amphibious operation.¹⁰ A limitation in resources and technology would indicate the former choice for an immediate solution, while efforts may be placed into the development/acquisition of Hovercraft by the turn of the century.

In analysing the role of India's maritime forces in the *zone of positive control*, and means of fulfilling the same, the role of the Coast Guard must

* Recent history has shown that such threats can emanate not only from states but also non-state actors like mercenary groups, as indeed happened in the Indian Ocean island states of Maldives (1988) and Comoros (1989).

be acknowledged. The "Baby Navy", as the Coast Guard is often called, was formed in August 1978 and is responsible for the following :-

- Protection against poaching and smuggling,
- protection of the marine environment,
- Search and Rescue at sea, and
- replenishment of vessels in the seas.

It directly complements the maritime forces by safeguarding the EEZ from economic exploitation, and indirectly by undertaking tasks hitherto performed by naval forces, thereby freeing those forces for the nation's defence commitments.

For the Coast Guard to efficiently perform its role it must possess the infrastructure and strength required for patrolling the EEZ. With a meagre strength of 2,500 personnel, 1 Frigate, 31 patrol craft and 18 aircraft¹¹ this task is patently beyond the means of the Coast Guard. In the 90's the Coast Guard must be expanded to include a force of at least 4 squadrons of patrol aircraft, 6 light frigates and 60 OPV's if it is to credibly perform its role. Serious consideration should also be given to the possible use of airships for Coast Guard tasks.

ZONE OF MEDIUM CONTROL

Several of our off-shore assets lie at distances of 300 km and more from the coast. Taking this into account against the fact that with advances in missile technology targets can be destroyed from ever increasing ranges, there is a need to engage hostile weapon platforms beyond the first zone of defence, for safeguarding our vital economic installations. These hostile platforms could be engaged in a zone extending from 500 to 1,000 km from the coast, which we may term as the *zone of medium control*. Within this zone India's maritime forces must possess a *denial* capability, rendering hostile intrusion into the zone an unprofitable proposition, and also afford protection to our merchant shipping.

Towards this end, an effective surveillance capability over the second zone must be developed. This can be achieved through development of observation satellites, long range maritime surveillance aircraft, and Seaborne Early Warning systems augmented by AEW (Airborne Early Warning) aircraft/helicopters. India has acquired 5 TU 142 M (Bear) Maritime Reconnaissance aircraft.¹² This is a step in the right direction and should be followed up by increasing their number for an effective surveillance cover

in this zone. The possibility of development/acquisition of AEW & C aircraft should also be studied in the next few years, since their possession would ascribe a strong deterrent value to any naval force at sea. As an interim measure India could acquire AEW helicopters armed with anti-ship missiles towards meeting its surveillance needs at sea, which would also enhance the force's strike potential.

The greatest threat to merchant shipping and naval units at sea emanates from submarines. While submarines have long constituted a danger to surface ships, their potency has increased further since (as mentioned earlier) their employment of sea-skimming anti ship missiles as their primary weapon. In order to protect out vital targets within the first zone, our merchant shipping, and also our naval forces engaged in carrying out their defensive tasks at sea, the Indian fleet must possess a strong ASW capability. This can be provided by a mix of ASW ships and helicopters. While the surface ship is, and will remain, the basic fighting element at sea, despite advances in technology, *et al*, a judicious employment of the air element enhances its efficiency.

An ASW helicopter increases the probability of target detection due to a higher ratio of area covered vis-a-vis time taken, and since self-noise (as for a surface ship) is obviated. Needless to say, a larger number of ASW helicopters would enable a more effective ASW cover at sea. Normally ships of the size of frigates/destroyers (the cutting edge of any fleet) are capable of carrying one ASW helicopter each. While India has successfully designed and built frigates capable of carrying two ASW helicopters each (the *Godavari* class),¹³ a medium sized fleet such as ours would still be unable to maintain a constant airborne sub-surface search, which would thereby limit its ASW envelope in range or continuity. A submarine armed with sea-skimmers could exploit these loop holes with devastating effect. For the fleet's own survival and effective performance of its role at sea, it must be able to create an unbroken ASW cover extending beyond the range of the submarine's sea-skimmers. This cannot be achieved without adequate airborne ASW capability.

The Indian Navy presently possesses two light ASW carriers¹⁴, which can provide the platform for the requisite ASW helicopters and also for a limited number of air defence interceptors, with the latter partially catering to the fleet's requirements of integral area air defence. However, both carriers are more than 40 years old and their continued availability at sea throughout this decade is doubtful. Consequently, there is a requirement to procure new carriers or else a few vessels in the class of *cruisers*, which could also provide the platform for the desired ASW helicopters between them and simultaneously enhance the fleet's anti-air, anti-surface and anti-submarine

potential. However, this would leave the issue of area air defence capability to be resolved elsewhere. For meeting the requirements of air defence of a cruiser based fleet, a larger number of destroyers/frigates would have to be procured. While the fleet would consequently gain in potency, this significantly larger fleet would also provide a larger target. Besides, the cost of development of this larger surface force would be equal to, if not more than that of acquiring new carriers. The viability of acquiring a carrier based fleet against a cruiser based one could be explored in the next few years, however.

The air threat at sea has been multiplied by the advent of anti-ship sea-skimming missiles and their fitment on maritime patrol aircraft. Pakistan's P-3's can be expected to carry 4 Harpoon sea-skimmers each, of 90 km range. The most effective defence against a sea-skimmer is destruction of the weapon platform itself, before the missile is launched. While shore-based interceptors can provide this cover in the first zone of defence, on the high seas both merchant shipping and the fleet are beyond their range while remaining within range of maritime patrol aircraft, such as the P-3/Atlantic and consequently their sea-skimmers.

This threat can be countered if the fleet possesses an integral air defence capability, which can be provided by fitment of long range SAM's on the ships and carrier borne interceptors armed with air-to-air missiles (AAM's). The use of AEW & C aircraft for improving detection capability and providing guidance to own interceptors would meet the remaining needs of area air defence on the high seas.

India's submarine force comprises of 15 submarines, including one *nuclear powered* submarine acquired on lease from the Soviet Union.¹⁵ Also included in this figure are 8 Foxtrot class submarines of 1958 vintage, which should be overdue for replacement.¹⁶ Taking into account the value of a submarine in exercising sea-denial, India should develop its conventional submarine force, and also induct a few nuclear powered submarines. A submarine's greatest asset lies in its stealth and ability to escape detection, which is directly related to the period of time it can stay submerged continuously. The value of a nuclear powered submarine can be gauged by the fact that, generally, it can stay submerged continuously for a period more than three times than that for a conventional submarine. It is questionable whether the US 7th Fleet would have considered steaming into the Bay of Bengal in Dec 71 had India possessed a few nuclear powered submarines at the time.

In keeping with technological advances, India must review the weapons fitted on its submarines. Now that missiles have become the mainstay of a submarine's firepower, India's submarines must match up to this

technologically advanced environment. While seeking to develop observation satellites, the possibility of providing surveillance data to submarines through observation satellites should also be explored in the next decade.

Missile technology has influenced modern strategy and tactics to a great extent. While guided missiles, other than ballistic missiles, have been included in the arsenal of nations for some time, the latter were restricted to use with nuclear warheads due to a lower level of accuracy. With advances in technology and a corresponding improvement in their accuracy, these missiles are now being employed with conventional warheads and constitute a major threat to forces on land/sea - particularly since their flight path precludes any credible defence against them. On May 22, 1989, India successfully tested the *Agni*, a 1,600 km range ballistic missile.¹⁷ Seaward deployment of this missile could provide a strong deterrent to adventurism into our waters by hostile battle groups, and hence the missile should be developed further for employment in this role.

ZONE OF SOFT CONTROL

The areas of the Indian Ocean which lie beyond a distance of 1,000 km from our coast constitute the third zone of defence, which may be termed as the *zone of soft control*. In this zone, India's maritime forces require some force projection capability at sea, in order to safeguard our merchant shipping and possible maritime interests in the future. In this regard, acquisition of long range maritime patrol aircraft, development of an observation satellite and provision of a self-sustaining ability on the high seas to the fleet, by way of replenishment ships for surface combatants/submarines, should meet our requirements. However, discharging their role in this zone can be effected by the maritime forces only if they can first effectively meet our security commitments in the inner zones of defence, and which therefore require greater attention in the near future.

MERCANTILE MARINE

The strength of a nation's mercantile marine is an indication of its economy and maritime potential. Indian shipping today stands at about 5.7 million GRT, comprising of nearly 400 ships, which constitutes *less than 1.5 per cent* of the world's gross merchant shipping (estimated to be well above 400 million GRT).¹⁸ This is indicative of the poor state of our maritime strength.

A nation's merchant shipping is a powerful economic asset, taking into consideration the quantum of trade borne across the seas. India's own trade by sea caters for about 97 per cent of its total trade. Instead of our merchant marine earning the state some useful foreign exchange by way of fully catering to our own trade and also meeting trading requirements of other

states, it is unfortunately not even in a position to satisfy our own needs. And our valuable foreign exchange is thus lining the coffers of other states with better developed merchant marines !

Whilst the problem has been appreciated at the planning level, shortfalls have resulted at the execution stage. For the sixth plan period, less than 50 per cent of the planned growth rate was achieved and whereas the seventh plan envisaged an overall growth of 15 per cent what finally resulted was a *reduction* in our merchant shipping amounting to over 11 per cent.¹⁹ The lacunae in the existing organisation need to be identified and eliminated on an urgent basis, particularly since nearly 100 ships in our merchant fleet will be due for replacement shortly owing to an extended life span.

Besides its economic importance, a nation's merchant navy can be used to complement the country's military potential also. It is pertinent to recall that amongst the first few aircraft carriers of the US, there were a number of merchant vessels which had been modified for flying operations and thereafter inducted into their Navy. The UK was able to launch a successful military operation to retake the Falkland Islands substantively supported by its merchant marine (including the use of the luxury liner Queen Elizabeth II as a troop carrier), many of which (like the container ship *Atlantic Conveyor*) were lost in the war. Besides its direct military potential, a state's merchant navy keeps plying the sea lanes in the face of hostilities, thereby keeping intact vital trade links and carrying critical war material when other shipping might refuse or charge exorbitant rates.

In the course of building up our merchant fleet, we must also develop our ship-building industry. With the cost of ships rising all over the world it would be an expensive, if not unfeasible, proposition to procure our ships from foreign shipyards. Attaining self-reliance in the field of shipbuilding is imperative for our progress. This would have a significant impact on our economy, and with growing expertise and self-reliance in the sphere of indigenous ship designing and production, a concomitant improvement in our ability to design and build warships would be evinced. One looks forward to the day when Indian built ships both merchant as well as men of war - are actively sought on the world market.

CONCLUSION

With its long coastline, large number of island territories and immense EEZ, India's maritime security needs are correspondingly considerable in nature, particularly in the wake of the increased militarisation and deteriorating security environment in the Indian Ocean region. Despite possessing a rich maritime history and traditions, India failed to maintain

a maritime strength in keeping with its security considerations in the past, and paid the penalty by having to suffer alien presence, and subsequently rule, on its lands for more than four and a half centuries. Even today India's maritime strength is far below what it needs to satisfy its legitimate security perceptions.

In seeking to fulfil its role of safeguarding the Indian mainland, island territories and EEZ, the maritime forces of India - which comprise primarily of the Indian Navy, Air Force units employed in a maritime interdiction role, and the Coast Guard - are only abiding by the traditional requirements of any defence force down the ages, i.e. to defend the state's integrity sovereignty and prosperity. For successfully achieving these traditional aims, India's maritime strategy should be structured around three *zones of defence*.

The first is the innermost *zone of positive control* extending upto 500 km from the coast, and directly covering the mainland, island territories and present and future off-shore assets. It is evident that the maritime forces should possess total force projection and sanitisation capability over this zone. The second and middle zone is the *zone of medium control* extending from 500-1000 km from the coast, within which potentially hostile units would be engaged before they could bring vital targets lying in the first zone within range of their weapons of destruction. Correspondingly, in this zone India would require an early warning/maritime power projection capability commensurate with the expected threat. The third and outermost zone is the *zone of soft control* encompassing the rest of the Indian Ocean. India must have the maritime potential to safeguard our sea lanes of communication and other possible future maritime interests in this zone.

Since the Indian mainland and island territories are spread over a large area, these zones of defence are also considerable in size. This factor, coupled to their being threatened in greater magnitude and at longer distances on account of advances in technology, requires India to build up a *balanced sea power* which can meet the requirements of defence in these various zones. Since the sea is the only medium where all the dimensions of war can be exploited, viz surface, subsurface, air and space, a balanced sea power would be one which can cater to multi-dimensional threats, and in our context these must be perceived in relation to our territorial integrity and off-shore assets as our maritime strategy is essentially defensive in nature.

In the Nineties, India's maritime strategy must also look towards the redemption of its merchant fleet and ship building industry, both of which are in none too happy a state at present and are long term investments for the nation in economic as well as military terms.

NOTES

1. For a detailed account of India's maritime traditions, refer to Rear Admiral K. Sreedharan's *Maritime History of India* (Government of India Publication, 1965).
2. Based on reports in the *Times of India*, Bombay, June 26 and July 23, 1990.
3. See *Military Balance 1989-90* (IISS, London, 1989), *Jane's Fighting Ships 1990-91* (Jane's, London, 1990) and *Jane's All the World's Aircraft, 1989-90* (Jane's, London, 1989).
4. *Military Balance 1989-90* (IISS, London, 1989).
5. *Jane's Fighting Ships 1990-91* (Jane's London, 1990)
6. Admiral RH Tahiliani, *Maritime Strategy for the Nineties* (*Indian Defence Review*, Lancers, Delhi, July, 1989).
7. See 4 *ibid*.
8. See H.T. Lenton's *Mine Warfare Vessels : Planned Construction* (Navy International, Surrey, June 1990). He states that, "it would require a minimum of 4 minehunters working continuously (and probably needing 2 crews) to keep any major port open during war." This figure would be further modified by factors like operational availability, reserve ships, etc.
9. See 4, *ibid*.
10. It has been estimated that conventional landing craft can beach on only 10% of the world's coasts, while the figure is 70% for air cushion vessels (*Jane's Fighting Ships, 1990-91*).
11. See 4 *ibid*.
12. See 4 *ibid*.
13. See 4 *ibid*.
14. See 4, 5 *ibid*.
15. See 4 *ibid*.
16. See 4 *ibid*.
17. *Times of India*, Delhi, May 23, 1989.
18. See 6 *ibid*.
19. See 6 *ibid*.

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8. Jasjit Singh, *Growth of Chinese Navy and its Implications for Indian Security* (Strategic Analysis, IDSA, Delhi, March 1990).
9. *Jane's Fighting Ships 1990-91* (Jane's London, 1990)
10. *Times of India*, Delhi, June 26 1990.
11. *Times of India*, Delhi, July 23, 1990
12. *Times of India*, Delhi, May 23, 1989.
13. HT Lenton, *Mine Warfare vessels : Planned Construction* (Navy International, Surrey, June 1990).
14. Admiral S. Gorshkov, *Sea Power of the State* (Pergaman Press, Oxford, 1976).
15. K.M. Panikkar, *India and the Indian Ocean* (Alten and Unwin, London, 1971).
16. H. Moineville, *Naval Warfare Today and Tomorrow* (Blackwell, Oxford, 1983).

AN APPEAL HELP THE EDUCATION OF CHILDREN OF NOVEMBER 1984 WIDOWS

The Sikh forum is providing financial assistance for education of orphan children of the violence since early 1985. Since January 1988, this has been transferred to a Trust named "Citizens' Relief Rehabilitation & Education Fund". This trust is duly registered and have obtained IT exemption under section 80G of IT Act 1961 at present valid till 30 Nov. 1990.

The sponsoring member/family/organisation who wish to sponsor one or more children will be provided with full particulars of the child i.e., name, age, sex, present address, grade, school and photograph of the child. Minimum monthly stipend required for educating a child is Rs. 75/- or Rs. 900/- (\$75) annually. The number of children who need this assistance is approximately 1200. We have been able to arrange donors for 910 children as well as for those who may withdraw at the end of the year.

We are approaching you with an appeal to enrol yourself as a donor to sponsor as many children's education as you can for five years, if possible.

The draft/cheque should be made in favour of "Citizen Rehabilitation & Education Fund" and sent to 3, Masjid Road, Jangpura, New Delhi-110014.

The Thirty One Days War--The Aftermath

SAHDEV VOHRA ICS

II

India's northern frontier had remained inviolable through history. The Chinese attack of 1962 shattered the complacent feeling of an invulnerable frontier north of the Himalaya mountains. Chinese troops had begun patrolling along the 2500 miles of the northern frontier at various points for the first time in 1954. This was immediately after the signing of the Indo-Chinese Agreement of that year. The Chinese threat was not over even after acquisition of 14,500 square miles of Indian territory in Ladakh. China continued to present a threat in conjunction with Pakistan, and India's defence problem has acquired another dimension to the threat from the north west. The routes from Tibet that pass through the Chumbi valley, and through Nepal and Bhutan are more feasible for an attack than the ones that China used in the attack of 1962. Close relations with these countries are therefore vital for India's defence. The setting up of nuclear missile bases in Tibet shows the vulnerability of India to this ultimate threat. China has not been content with the building of roads in and of rail connections to Tibet in securing a firm hold of that autonomous region of her empire, although the formal position is one of Tibetan autonomy, but in fact Tibet was ruled through ethnic Chinese. Realisation that Tibet will not lose her distinct personality seems however to be dawning.

As a counter measure to the refuge given by India to the Dalai Lama and the Tibetans who fled from the Chinese occupation, the Chinese have been giving arms and training to the Nagas and other inhabitants of India's north-eastern frontier and create a state of unrest in that part of our country which is linked geographically with the rest of the country by only a "corridor" passing south of Bhutan and north of Bangla Desh. To the north-west, the defence problem arises not only from the Tibetan frontier, but also from the Sinkiang autonomous republic which has been strengthened militarily as a buffer between China and Russia. The Karakoram Highway from Sinkiang via the Khunjerab pass in occupied Kashmir provides access to China which can threaten India's north-west frontier, and the route has been recently used in providing arms and assistance to the Afghan rebels in Pakistan.

Finally, we must remind ourselves of the Chinese attitude of claiming as part of the "Celestial" empire all neighbouring countries that China had had contacts with through her ancient past. "A Brief History of Modern China", published in Beijing in 1954 states "The territories claimed by China include, besides Tibet and the Mongolian People's Republic, large portions

of the Soviet Republics of Kazakhstan, Kirghizia, Tadjikistan, the Pamir area, most of all of Ladakh; the whole of Nepal, Bhutan and Sikkim, not only the mountains and foothills south of the McMohan Line but also Assam, all of South East Asia, Burma, Thailand, Laos, Cambodia, North and South Vietnam, the Federation of Malaya and Singapore, the Andaman Island (India), the Sulu Archipelago (Phillippines), Taiwan and the Offshore Islands, the Rynku Islands, North and South Korea, Sakhalin and Kuerile Islands; and finally large parts of the Soviet mainland.....". The reiteration of this claim by the Chinese Republic is no empty threat - as was also borne out their attack on Vietnam. We cannot ignore this open declaration of China's claims backed as they are by concrete action.

INTERNATIONAL REACTIONS

Despite Nehru's goodwill towards Communist China, the relations between India and Communist China began in an unpropitious setting, so far as China was concerned. The Communist rulers of China (as of USSR) had adopted the standard approach of Communist parties that the Indian National Congress were puppets of the former colonial power, were, as Mao-Tse-Tung said, "the running dogs of imperialism" and had to be eliminated in favour of genuine proletarian leadership. Nehru on the other hand had greeted China's new rulers with enthusiasm, and India was one of the first countries to recognise the Communist Government of China. India sponsored their case for membership in the United Nations and recognised China's special relationship with Tibet. India, however, expressed the hope that the question of China-Tibet relations will be settled peacefully. China gave a sharp rebuff to India's view and declared it as interference in the internal affairs of China, and went ahead with the invasion of Tibet.

The Communist Government of China came upon the inter-national stage in October 1950 with her loudly proclaimed "liberation" of Tibet when the People's Liberation Army marched into Chamdo province of Tibet. Great Britain which had established bilateral relations with Tibet in the twentieth century was out of the scene and India was faced with the consequences of the change of Tibet's status. China now became India's direct neighbour for the first time in history. Neither Great Britain nor USA took a stand in favour of Tibetan independence, and India which was the only power directly affected also did not take up Tibet's case. Only the small State of El Salvador took a stand in favour of Tibet when she sponsored her complaint before the General Assembly of the United Nations but Communist China was not a member of the body and the issue was allowed to die down.

China next figured in the international stage when USA set her armies into Korea in 1950. It was India that acted as China's messenger to USA

that if the latter crossed the 38th parallel into North Korea, China would come into the war, and this is what happened. India was appointed Chairman of the Neutral Nations Repatriation Commission in 1953. India continued her policy of making up to China when the Sino-Indian Agreement regarding Tibet was signed in 1954, by which India agreed to forego her special position in Tibet under the Indo-Chinese agreement of 1906 and gave up the control of the telegraph communications and rest houses along the routes to the trading centres that had been set up by Britain.

China was invited to the Bandung Conference of Non-aligned nations in 1955 at the instance of India. Chou-En-Lai made an impressive debut and was able to disarm the suspicions and hostility of those nations which had feared China's expansionist aims in South East Asia, as much as her use of the weapons of infiltration and subversion. This was also the occasion when China was to begin the process of winning over Pakistan. Pakistan's relations with China had hitherto been dictated by her alliance with USA, and by the apparent friendliness of Indo-Chinese relations. But at Bandung, Chou-En-Lai took pains to assure Pakistan that there was no ground for any differences between them. As pointed out earlier, an English author, Rushbrook Williams, has indicated in his book "The State of Pakistan" (London 1964) that Chou-En-Lai pointed out to the Pakistan rulers that relations with India, though outwardly friendly, might not long remain so, in fact "a definite conflict of interests could be expected in the near future".

As differences with India came out into the open, China accelerated her friendly relations with India's neighbour. Chou-En-Lai concluded a border agreement with Burma in 1960 on his way to New Delhi in April 1960 regarding the Indo-Chinese border dispute, and he signed a friendship agreement with Nepal on his way from New Delhi. She also engaged in an exercise of creating a favourable image of herself by giving aid to Nepal, Sri Lanka, other Asian and African countries, and thus gained the goodwill of the third world countries. China's relations with the USSR were however undergoing a "U-Turn" signalled by the recall of Russian aid teams from China in 1959. At the time of the Kongka incident of October 1959, Khrushchev had privately counselled the Chinese against provoking India. China was not at all pleased at the USSR stand over the dispute. China's opposition to the Khrushchev doctrine of co-existence with USA came out into the open when Khrushchev visited China in 1960. India had received hostile publicity in the western world just before the India-China war, over the annexation of Goa. On behalf of USA, Adlai Stevenson spoke against India's action in the United Nations.

The revolt in Tibet and the flight of the Dalai Lama to India in March 1959 first 'internationalised' the India-China differences. On the one hand,

China accused India and USA of organising the revolt of the Khampas, and on the other hand, there was world-wide sympathy for the Tibetan refugees who fled into India by the thousands. Not all the virulence of Chinese propaganda could negative the stark evidence of nearly 100,000 Tibetans that had fled their homeland rather than suffer under Chinese occupation. However, China while hurling invectives at India over the shelter given to the Dalai Lama and the Tibetan refugees was relentlessly advancing in western Ladakh. The Longju incident of August and the Kongka incident of October 1959 first brought into the open the border differences between India and China.

Simultaneously with the Chinese attack on the Indian border in October 1962, they launched a "war of words" to place their case before the other countries in the most favourable light and to enlist their support. A statement put out by the Chinese Government on 24 October stated, "Although India occupies more than 90,000 square kilometers of Chinese territory in the eastern sector, provoked two border clashes in 1959 and made claims to large tracts of Chinese territory, the Chinese Government has always looked for a peaceful settlement.....and pending a peaceful settlement, the extent of actual control by each side should be respected...." They could not be expected to mention how they had avoided Indian efforts to get them to state the Chinese claims till November 7, 1959 when they had already occupied by infiltration most of the area they claimed. Till then, the Chinese Prime Minister had evaded the issue by telling the Indian Prime Minister that he had not had time to examine the question, or that the matter was not ripe for settlement.

The Chinese proposed that in pursuance of their proposal of October 24, both sides should withdraw armed force 20 kilometers from the line of actual control, and not to cross the traditional customary line in the middle and western sectors. They were aware that the proposal would be unacceptable to India because it meant that the Chinese occupation in Ladakh would be a *fait accompli*, as the line of actual control now covered about 15,000 square miles, and had in fact been rejected by India earlier. The wording of the offer was (1) Both parties affirm that the Sino-Indian boundary must be settled peacefully, and pending that, withdraw armed force 20 km from the line of actual control; (2) The Chinese Government is willing to withdraw its frontier guards north of the line of actual control and both sides undertake not to cross the traditional customary line in the middle and western sectors of the border.

It will be seen that there was a hint (in point 2 of the offer) though not an offer, that the Chinese Government would stay in north of the McMahon line on the eastern sector. In fact, since 1956, the Chinese Prime

Minister had indicated that China would accept the Indian occupation of the area upto the McMahon line if India accepted the Chinese occupation in Ladakh. The Indian Prime Minister dealt with the offer in his reply to the Chinese Prime Minister on October 27. Nehru rejected the offer as being less than straightforward. He proposed that both sides reverted to the status quo before 8 September 1962 as a preliminary to talks between the two sides. Chou-En-Lai replied on 4 November 1962. He confirmed that line of actual control would mean the McMahon line in the eastern sector, and claimed that the Chinese control line in the western and middle sectors "coincides in the main with the traditional customary line which has been consistently pointed out by China". Chou-En-Lai also justified the Chinese attack on the Indian post at Che Dong as in doing so they were not contravening the so-called McMahon line. On 14 November, Nehru pointed out that the 7 November 1959 line of actual control advocated by China "is projected three years ahead to be identical with the line since the massive attack of 1962", thus retaining also the fruits of the 1962 attack.

The Chinese were advancing in the eastern sector towards Bomdila, and had advanced to the claim line in the Chip Chap river, the Galwan valley and in the Chang Chenmo area. Having achieved this, although they failed to dislodge the Indian forces at Chushul and Demchok, the Chinese declared a cease-fire on November 21, 1962. They announced withdrawal of 20 Km north of the McMahon line and to stay the same distance beyond the line claimed in Ladakh and in the middle sector.

The Chinese had through their success at arms completed the undeclared task of advancing into Ladakh beyond the full extent of their border claims. Having achieved the same, the Chinese declared unilateral cease-fire. They had tried through the propaganda campaign to obfuscate this aim of the undeclared war. The international community was unable to make out the rights and wrongs of this remote conflict. The United Nations did not take cognisance of it as China was not a member of the body. The United States of America had declared through its Ambassador in India that it recognised the McMahon line as the international boundary and readily agreed to provide air cover and mountain warfare equipment, but that could be of no immediate utility. The USSR made no public comment which was taken to be significant, and it is possible to argue that the attitude of the two super powers influenced the Chinese to declare the cease-fire. It should also be borne in mind that USA and USSR were at this time locked in a fierce confrontation which had come about from the Cuban incident and which had threatened a nuclear war. The result was that the Sino-Indian conflict did not receive their full attention, and China was free to deal with the matter without USSR or USA looking over its shoulder.

Despite its hostility to Communist China, the USA refrained from comments on the India-China border dispute till the outbreak of war. Then on October 21, Lincoln White, the Press Officer of the State Department issued a statement that the U.S. was "shocked at the violent and aggressive action of the Chinese Communists against India" (vide NYT 22 Oct. 1962). It became also apparent that the US was willing to give military aid to India despite Pakistan's declared opposition. On 27 October, Galbraith the US Ambassador to India issued a statement in New Delhi that USA recognised the McMahon line as the boundary between India and China in NEFA. Britain's Prime Minister, however, acted earlier and on October 27 had already despatched military equipment to India. The American arms supply started on November 10. President Kennedy also restrained Pakistan from going to China's help by sending a letter to President Ayub on October 30, declaring that the Chinese attack against India was a threat to the whole sub-continent" (NYT Oct. 31, 1962).

China had not won any international sympathy over its invasion of Tibet in 1950, and the way it handled the revolt in Tibet in 1959. In fact, on 21 October 1959, the General Assembly of the United Nations had passed a resolution calling for respect for the fundamental human right of the Tibetan people, and for their distinctive religious and cultural life. In 1961 and 1968 also the General Assembly affirmed the Tibetan people's rights to self-determination. In respect of the attack on India also China defied non-aligned opinion by refusing to agree to the proposals of the Colombo Powers. But it had also gained prestige among them by its demonstration of military powers over India. Subsequently, China won support from USA because of the super power rivalry in which USA has aligned China on its side since 1971. Pakistan has also aligned itself with this Sino-US axis, and China and Pakistan supported each other in anti-Indian policies as will be seen when we deal with the developments since 1962. Apart from help to Pakistan, China kept up pressure on India through training and supplying equipment to Naga insurgents on the Indo-Burmese border. The Naxalite insurgents in the Sub-Himalayan region were also in receipt of such clandestine assistance from the Chinese.

The Heads of State in Asia and Africa who were in the vanguard of the non-aligned movement formed a group from amongst themselves, that came to be called the Colombo powers since they met at Colombo in Sri Lanka, to study the situation and help to bring about a settlement. The result was a set of proposals which the Chinese refused to implement in so far as they related to a withdrawal of the Chinese forces in the western sector to the line of advance before the thirty-one days war.

PEACE PROPOSALS

The New China News Agency published the text of the statement of the Chinese Government of November 21, 1962 declaring cease-fire and announcing withdrawal beginning from December 1, to positions 20 Kms, behind the line of actual control which existed on 7th November 1959. It clarified that they would withdraw 20 Kms north of the McMahon Line in the east. The proposals were a repetition of the Chinese position that they had a line of actual control in Ladakh which corresponded to their claim as revealed by the Chinese first in 1959 and latter by the presentation of a more westward version by the Chinese officials in 1969. The Chinese claimed within the line of actual control of November 1959 not only the 7000 square miles occupied prior to 1959 but also about 5000 square miles occupied from 1959 to 1962.

The representatives of UAR, Ghana, Indonesia and Sri Lanka, Cambodia and Burma on behalf of the non-aligned nations met at Colombo from December 10 to 12, 1962 to prepare a plan for reconciliation of the two sides.

Their views were stated by the Colombo powers as follows :

1. Whether the McMahon Line is considered an illegal imposition or not, it has in fact become a line of actual control except in Che Dong and Longju which are disputed. Arrangements similar to Longju could be made in respect of Che Dong pending a final settlement.

2. In the middle sector there has been no military action and the line of actual control is not in dispute except at one place Wuje-Barahoti.

3. On the western sector, China and India were not agreed as to what was the line of actual control as on November 7, 1959. India exercised executive administrative control to the west of what the Chinese claimed to be the traditional, customary boundary and prior to 1959 may have sent out patrol to the east of that line from time to time. From 1959 to 1962, India had set up 43 military checkposts to the east of that line. The Chinese held prior to 1959 some-where to the east of the traditional, customary line claimed by them and between 1959-62 established some military outposts westward. The Chinese reached what they claimed to be the traditional, customary line in 1962 as a result of their recent military actions. They proposed that while the Chinese forces should carry out the withdrawal proposed by them on November 21, the Indian forces should remain where they were and the area in between should be demilitarised and administered by civilian posts to be agreed upon by both sides.

The Colombo Powers, therefore, suggested that in Ladakh a demilitarised zone be created by the Chinese withdrawing 20 Kms. from the cease-fire line as they had proposed to do, while the Indian side should keep their existing military position. With regard to the eastern sector, as 'the line of actual control' was not in dispute and would, they suggested, be the cease-fire line. In the middle sector the Colombo Powers recommended that if there were any differences, those could be pursued by the parties by peaceful means.

The proposals of the Colombo Powers were not accepted by China who in 1963 set up seven civilian posts unilaterally in the demilitarised area of Ladakh. On October 9, 1964 at the time of the Cairo Conference of non-aligned nations, the Chinese Government officially declared that they would not change their position in regard to the proposals of the Colombo Powers or regarding the withdrawal of these seven posts in the demilitarised zone in Ladakh. Towards the end of December 1964, Chou-En-Lai, speaking to the National People's Congress in Peking, rejected the idea of holding bilateral talks on the basis of withdrawal of the posts in the demilitarised zone in Ladakh.

BORDER INCIDENTS SINCE 1962

Communist China has always advocated that both countries should respect the line of actual control as Chou-En-Lai reiterated in a letter of 24th October 1962 to Nehru while claiming 90,000 sq. Km. of Arunachal Pradesh. Chou-En-Lai's letter stated that the line of actual control upto 1959 was along the boundary (except at individual places). Since 1959, India had, according to Chou-En-Lai, penetrated "deep into Chinese territory". Nehru replied pointing out that the two sides should revert to the position of 8 September 1962. Chou however rejected this saying that that would enable India to retain Kechilong river area north of the so called McMahon line", and secondly as "the Indian side from 1961 onward, occupied larger parts of Chinese territory east of the actual line of control and established over 40 posts" in the western sector. On 14 November Nehru replied that "it was on 8th September that your force crossed the portion and threatened the Dhola post of India". Regarding western sector, a note enclosed by Nehru explained "the line of actual control in November 1959 was no line but a series of positions of Chinese forces on Indian territorywithin three years a large network of military roads and posts beginning with posts opposite Daulat Beg Oldi in the North, along the Chip Chap river valley and across the Galwan river to the Pangong and Spanggu Lake areas".

The border area remained 'active' after the cease-fire and a cold war of border tension has continued between India and China. The tone of the notes exchanged showed no abatement in virulence and invective. In January

1963, China accused Indian troops of crossing the Natu La Pass on the China-Sikkim border and of constructing military structures, which they demanded should be demolished. On July 5, 1963, the Indian Government protested that a Chinese patrol had intruded into Seby La "which is on the frontier about a mile south of Natu La". The boundary of between Sikkim and Tibet had been defined by the Treaty of 1890 between Sikkim and China and it was not easy to account for these border incidents except as a result of strengthening of local defences by both sides.

The Chinese Government proceeded unilaterally to strengthen their hold on the areas where the Indian forces had withstood the Chinese onslaught in 1962. In the west this was Spanggur lake area and Demchok. They fortified their position near Longju in the eastern sector and complained about the Indian presence in Bara Hoti in the middle sector.

The ill-will found further vent also over the issue of prisoners of war. In October 1963, the Chinese stated that they had captured 3900 Indian military personnel whom they had released except some "captured Indian officials of and above field grade" who had expressed a "desire to visit the interior of China". The Chinese had refused to cooperate with the Red Cross of India in the matter of release of prisoners of war and spread their release over a period of a year or so, without allowing verification of the number of prisoners of war, and way they had been treated. In July 1964, the Indian Government protested that in the western sector whereas "in November 1959, the Chinese post were in Spanggur, Khurnak Fort, Kongka La and near the main Aksai Chin road", the Chinese had since occupied areas to the west of this line from 1960 and in the autumn of 1962. The "nibbling" at Indian territory had thus continued since 1962.

On May 30, 1964, "seven armed Chinese military personnel were observed 8 miles north of Fukcha in Ladakh in the 20 Km demilitarised zone. Similar military activity was also observed in Kongka la, Jara La and Chang La areas". The Chinese accused the Indian troops of crossing the line of control in Ladakh at Karakoram pass, Spanggur, Demchok etc. The Indian Government rejected these allegations and pointed out that the Chinese had established 7 civilian posts in the 20 Km demilitarised zone which was also being patrolled by their military personnel. This was against the Colombo proposal, and also contrary to the declarations that the Chinese Government had made that they had evacuated this zone. At the Cairo Conference of non-aligned nations, the Chinese Government confirmed on October 9, 1964 that they had rejected the Colombo proposals regarding withdrawal of these posts. Towards the end of the year, Chou-En-Lai, speaking to the National Peoples Congress in Peking, finally rejected the idea of holding bilateral talks on the basis of neither side maintaining posts in the demilitarised zone.

In January 1965, the Chinese Government alleged that Indian troops were building structures across the border of Sikkim on the Chinese side of the Jelep-la Pass, and that these troops had seized livestock belonging to Tibetan civilians. This was denied by the Indian Government. They stated that the Chinese had crossed the line of actual control in Ladakh in the Chip Chap river area in April, and had crossed into India over the Mana pass in the middle sector. At the time of the Indo-Pak war of 1965, the Chinese Government renewed their allegations with regard to Sikkim. In a note of September 8, they stated that "Indian troops crossed the China-Sikkim boundary on four successive occasions in July 1965". They listed several other such violations in August also not only from Sikkim but also in the western sector of the boundary, linking the latter incidents with "armed suppression against the people in Kashmir, and unleashing and expanding its armed aggression against "Pakistan". They made fresh allegations on September 16, and again on September 19.

The Indian Government accused China of "creating" incidents both in the Western Sector and on the Sikkim border to coincide with the India-Pakistan war. The Chinese captured three Indian soldiers on the Sikkim-Tibet border. Their dead bodies were handed over to the Indian Embassy at Peking on September 28.

The Indo-Pak war had been halted by a cease-fire but the Tibet-Sikkim border remained disturbed. An Indian note of 21 September 1965 stated "The Chinese forces have moved up all along India's northern border and started firing at Indian border posts in Sikkim and Ladakh", as well in the middle sector at Wuje and Lipu Lekh pass. The Chinese note of 24th September declared - "China will not cease to support Pakistan against Indian aggression. Aggressive Chinese intrusions continued in October and November. On December 12, the fighting on Sikkim border resulted in six Indian dead. Incidents took place in Ladakh at Daulat Beg Oldi and also east of Bhutan at Che Dong or Thag La ridge which the Chinese had claimed earlier (in March 1963) to have vacated. During 1966-67, China was plunged in the turmoil of the Cultural Revolution, but Sikkim continued to be the focus of disturbance. On 11 April, China warned India "in all seriousness, you must draw lessons from your past experience, stop provocative activities along the Chinese-Sikkim border and cease all your calumnies against China, otherwise you are bound to eat the bitter fruits of your own making". In September 1967, they alleged "the unbridled intrusions by the Indian troops are a component part of the world-wide anti-Chinese chorus struck up by USS imperialism and Soviet revisionism". India protested against the intrusion into Sikkim by strong detachments of Chinese troops who attacked Indian troops with automatic weapons and heavy artillery. The Indians proposed a cease-fire and a meeting between sector commanders.

In 1968, China and Pakistan entered into an agreement for construction of a land route between Sinkiang and Gilgit and Baltistan in Pakistan-occupied Kashmir. The Government of India protested against this "illegal interference with regard to the territory of Jammu & Kashmir which is an inalienable part of India".

China had kept up pressure on India also through training and supplying arms to Naga insurgents on the Indo-Burmese border and to Naxalites in the Sub-Himalayan region. Such clandestine assistance to anti-government elements was part of China's policy of weakening neighbouring countries where the Communist parties and the Chinese ethnic stock were also utilised for the same purpose. In 1969, China modified this policy as part of a selective approach to third world nations. Towards India, however, it continued its severe pressure "both as a rival for Asian power whose interests were regarded as inimical to those of China and as a prime target for Peking's insurrectionary line". (Robert G. Salter - 'Chinese Foreign Policy, 1966-77').

The continuous hostility between India and China was linked up with developments in Indo-Pakistan relations. In the revolt which broke out in 1971 in East Pakistan against West Pakistan, China intervened on the side of Pakistan, as it had done in 1965. On 13 April 1971, the "Pakistan Times" quoted a message from Chou-En-Lai to Yahya Khan which read "Your Excellency should rest assured that should the Indian expansionists dare to launch aggression against Pakistan the Chinese Government and people will, as always, give full support to the Pakistan Government and people in their just struggle". The arms supplied by China to Pakistan were used against East Pakistan and the Sinkiang Gilgit highway was used to send military and other supplies. China also gave a loan of 100 million dollars to Pakistan and later by announcing the despatch of Seventh Fleet from the Pacific to the Indian Ocean as a demonstration in favour of Pakistan. President Nixon directed his advisers to "tilt against India" in the war that resulted in the creation of Bangla Desh later in the year. Possibly, China and USA were restrained by the Indo-Soviet Pact of Mutual Assistance 1971 in their demonstration against India. The creation of Bangla Desh ultimately helped to bring about a reassessment of India's position in the Sub-continent.

PRESENT PERSPECTIVE

The Seventies were a period of rapprochement between the USSR and the USA. India had also launched a process of rapprochement towards her neighbour Pakistan when it signed the Simla Agreement in 1972. But it was not till 1976, that India succeeded in making a dent in China's stance of hostility. Mrs. Gandhi had declared an emergency in 1975 due to internal developments. In 1976, Mrs. Gandhi decided to restore diplomatic relation

with China at the level of Ambassadors. In that year there was a exchange of Ambassadors between the two countries. But the thaw was limited. In 1977, Vietnam was accused by China of provoking exodus of the Chinese nationals who had been living in that country. The bitterness over the wholesale exodus revealed a deep-seated but hitherto suppressed enmity between the two countries. The Chinese irredentist-ambition from her past were revealed with regard to Indo-China. The Janata Government that came into power in India in 1977 also continued the policy of rapprochement with China. The Foreign minister A.B. Vajpayee visited China. While the Indian Foreign Minister was in China on this visit of goodwill, China suddenly launched a war on Vietnam in January 1979. The Chinese Deputy Prime Minister Deng Xiaoping declared that they would teach Vietnam a lesson as they had done to India in 1962. This terminated the visit of the Indian Foreign Minister and gave a setback to the process of rapprochement.

In December 1979, the USSR sent a large military force of 80,000 into Afghanistan by a spectacular airlift operation, to support the Communist Government of Tarakki. This put a stop to the process of rapprochement between the Super Powers, and reinforced the Chinese axis with Pakistan. Raiders from among Pakistan-based refugees across the border were supplied with arms from China and so were the insurgents in Wakhan and other border areas of Afghanistan adjoining China. The differences between China and India were manifested in Indo-China also where Vietnam had intervened militarily in Laos soon after the cessation of war with China, in support of the Hang Samarin regime. This was opposed by China but India had recognised the regime, showing that India and China are divided not only by the border dispute but also by their different perceptions and stance in the larger context of South East Asia and South Asia.

China's military strength continues to be formidable. According to the Military Balance 1989-90 prepared by the International Institute for Strategic Studies, London, China has a total of over 3 million active armed forces, besides a reserve of 1.2 million. It has a combat aircraft strength of 5,000. Its nuclear forces are second only to these of USA and the USSR. It has emerged as a major supplier of arms to the Middle East and Pakistan. At the same time, there has been a welcome change in the relations between India and China, a number of meetings regarding the border issue were held between officers from time to time from 1979 to 1987. As these seemed to be taking matters no further and there was even a fresh outbreak of hostilities in June 1986 over Sumdorong in the vicinity of the area of the invasion of October 1962 in the area east of Bhutan. The visit of the Prime Minister of India to China in December 1988 has raised hopes of a continuing improvement in relations. The two sides "agreed to settle this (border) question through peaceful friendly relations".

Major General Sir Charles Metcalfe MacGregor KCB CSI CIE

12 August 1840 - 5 February 1887

A CHARACTER STUDY

MAJOR ROBERT HAMOND (RETD), THE ROYAL NORFOLK REGIMENT

There is no shortage of written material about this remarkable General yet few people today have heard of him or of the military reconnaissance medal which the United Service Institution of India struck in his memory in 1888. He did not command in any campaign which might have made his name well-known to the British public yet his organisation of the Intelligence Service in India probably did as much for the Country's defence as any of the victories of the more famous commanders of the time.

His career and achievements have recently been well-covered by Major General B.D. Kale in his article '*Major General Sir Charles MacGregor: A Profile*' published in the USI Journal of October-December 1988 (Vol CXVIII No. 494). MacGregor himself wrote several books about his travels, among them '*Wanderings in Balochistan*' 1882 and '*Narrative of a Journey through the Province of Khorassan and on the Northwest Frontier of Afghanistan in 1875*', two volumes, 1879. His 'magnum opus', '*The Defence of India : A Strategic Study*', Simla, 1884, reflects the military thinking of the time by those who were strong adherents of the 'Forward Policy' in India. In 1872 he supervised, as QMG, the compilation of '*Routes in Central Asia*' although this was not published until 1889, two years after his death.

Not long after he had died Lady MacGregor set to work to write her husband's biography in her '*The Life and Opinions of Sir Charles Metcalfe MacGregor*' in which she tries to vindicate his feelings of injustice, real or imagined, which he had expressed during his lifetime. But her efforts rather confirm that, for all his brilliance in organisation and his undoubted achievements, he found it very difficult to get on with his fellows at almost every level, was convinced that he had suffered from undeserved bad luck and that 'many hands were against him'. While he had some cause for his convictions, as will be seen later, he rather magnified this obsession although it did not prevent him from achieving a distinguished career.

In 1923 Lady MacGregor presented to Colonel Arthur Campbell Yate, a friend who had served on the Northwest Frontier for many years, her husband's unexpurgated '*Personal Diary during the War in Afghanistan 1879-1880*', (a diary which one must conclude she had not studied in detail). Yate was appalled by the criticisms made by MacGregor in the diary and he appended to it a sheet of paper which read : 'That any officer should

have dreamed of printing such an injudiciously-written Diary as this appears to me to be inexplicable; and yet here it is in print and that unquestionably by MacGregor's own order. His own egotism and self-seeking and the way in which he writes about Sir F. Roberts are in the worst taste and jar upon one's sense of what is right and manly and dignified. In fact the man on whom this book reflects the least credit is MacGregor himself.' Fortunately Yate, by then an old man, did not, despite his outraged feelings about its contents, attempt to edit out of the diary some of the more offensive criticisms made by MacGregor and, after his death in 1929, it passed with other books from his library to a learned Society of which he had earlier been honorary secretary. Thus we have an original diary which gives us a true insight into MacGregor's opinions, ambitions and character so I have therefore based my study of his character to some extent on this diary which has recently been sympathetically and fairly edited in a book under the original title by Dr. William Trousdale and published by Wayne State University Press, Detroit, 1985.

Personal diaries usually give a better picture of an author's character, qualities and failings than do biographies written by others. MacGregor's diary is no exception to this rule; he portrays himself 'warts and all' in a manner which is revealing and, in some ways, rather endearing because of his honesty. He shows himself to have been a very complex character, devoted to soldiering but often in disagreement with his superiors and awkward in his relations with the soldiers under his command -- 'They do not like me but I think they have confidence in me' - he wrote and, from all accounts, there is no reason to doubt this view of himself.

Although unsociable by nature he was confident of his soldierly qualities and rightly resented it when socially well-placed and wealthy officers, whom he knew were inferior to him in military ability, were promoted above him solely on account of their social contacts and influence, as so often happened in those days in the Army. If one were to compare him with later leaders of men perhaps the one who best fits the bill would be the late Major General Orde Wingate. Both showed brilliance and innovation in their ideas and ruthlessness in the pursuit of their aims, but they were uncomfortable bed-fellows within the conventional military establishment so that, while they earned the admiration and devotion of some, they were heartily detested by others.

In modern parlance MacGregor was a 'thruster'; he was a gifted organiser and 'got things done'. His personal courage was beyond doubt as also were his powers of physical endurance. But he had an obsessive desire for honours and awards, and for personal power. His three great

ambitions were, to win the Victoria Cross, to be Knighted, and to be appointed Amir of Afghanistan after it had been conquered. The first he never achieved although he 'sought the cannon's smoke' on many occasions. He came within an ace of winning it during fighting on the North China plain at Sinho on 12 August 1860 where he was serving with Captain Walter Fane's Irregular Troop of Cavalry.* At a critical moment in the battle MacGregor led a charge to save a battery of British guns which were in danger of being over-run by 'Tartar Cavalry' and was hit in the face and chest by five slugs fired at point-blank range. The Commander in Chief visited him in hospital and praised his gallantry, as also did Captain Stirling who commanded the battery, and rumours flew round the camp that MacGregor was going to be awarded the Victoria Cross. But he did not receive it; in retrospect it would seem that he certainly deserved it and many officers who witnessed the incident thought that he had earned it by his courage. Unfortunately, true to his character, MacGregor had, a few days previously, been highly critical in public of Fane and his handling of the Irregular Cavalry. When this had come to Fane's ears he was furious and now revenged himself on MacGregor by refusing to admit that he had witnessed the latter's saving of the guns and, furthermore, was not prepared to call for sworn testimony from other witnesses. There is little doubt that MacGregor should have received the award and the affair rankled with him for many years, especially as his friend, supporter and future commander in Afghanistan, General Roberts, had been awarded the Victoria Cross in 1957 'merely for cutting down two mutineers and recapturing a Standard', whereas MacGregor himself had engaged in much hand to hand fighting at the time without any award.

His second ambition he achieved when HM The Queen knighted him (KCB) at Windsor in 1881 but, not surprisingly, he did not fulfil his aim of becoming Amir of Afghanistan. Apart from the fact that we did not succeed in annexing Afghanistan, one is mystified as to why he desired this appointment; he makes quite clear in his diary that he had an intense dislike for the Afghanis, despising them as 'a dirty, treacherous pack of thieves and brigands'.

With Curzon, Lytton, Durand, Roberts and others, MacGregor was a fanatical believer in the 'Forward Policy' which regarded as essential the occupation or military control of territories adjacent to the Northwest Frontier of India in order to create a buffer zone to check Russian expansion towards the frontiers of India. MacGregor himself made several arduous journeys in remote areas beyond India's frontiers, often without permission - or in

* After the 1922 reorganisation, renamed 19th King George V's Own Lancers.

direct disobedience - of the Government of India which was, prior to the war against Afghanistan in 1879-80, becoming lukewarm about the 'Forward Policy'. But he was secretly encouraged by Roberts and others so went on his way, spying out the land and reconnoitring feasible military routes across it. The medal struck in 1888 in his memory by the USI of India was intended to encourage Officers and Other Ranks to make similar journeys of exploration and military reconnaissance in little-known areas, some of which were populated by hostile inhabitants. MacGregor would undoubtedly have approved of this tribute to his memory.

According to his brother officers, MacGregor was a gruff and silent man, becoming cheerful and loquacious only when the prospect of battle loomed, the bloodier the better, and he seems to have had few close friends. His intolerance of his fellow officers, while perhaps justified when he met ineptitude, inertia and vacillation, did nothing towards making him a popular figure although, in fairness, one must say that he did not spare himself from self-criticism - 'I am too abrupt; I make enemies by being too aggressive' and later, during the 1879-80 Afghan war, - 'I drink too much and am too fat, especially in the belly.'

Yet beneath that rough and gruff exterior - which perhaps served as a cloak for his sense of vulnerability and social awkwardness - there lurked a warmer side to his nature. In 1869 he married Frances Mary Durand, a girl aged only eighteen and the daughter of Sir Henry Durand, one of his 'Forward Policy' allies. In 1872 she bore him a daughter, Genevieve Muriel ('Viva'). A year later Frances Mary, whose health was failing, took passage for England with Viva but died before she reached home. She was only twenty-one.

MacGregor was shattered; although only short, the marriage had apparently been a very happy one and he remained devoted to Viva throughout the rest of his life despite his regret that she had not been born a son. He did not marry again for ten years until he met and married Charlotte Jardine. This second marriage also seems to have been a success as his wife loved and admired him but it lasted only four years before MacGregor himself died. Throughout his diary one is also struck by his affection for some of his junior officers. He had no use for those who were 'stuck up', effete or lazy - the last fault being the greatest crime that an officer could commit in MacGregor's eyes - but others he liked and often, when talking of a young officer, would say - 'He is a good officer; I must do something for him'. - Perhaps this was the cry of a lonely widower who had no son of his own; one is reminded of Field Marshall Montgomery's close relations with his efficient young liaison officers, another lonely widower

who shared with MacGregor clear thinking, ruthlessness, showmanship and, on occasions, a whiff of that same intolerance of, and disloyalty to, his superior commanders.

But on occasions, MacGregor carried his censures too far; his written criticisms of his superiors - and other officers - during the 1879-80 war in Afghanistan, in particular of his Commander in Chief, General Roberts, showed a disloyalty which could have been very dangerous for MacGregor. Had the contents of his personal diary become known to other officers at the time, MacGregor would almost certainly have been relieved of his command and perhaps dismissed from the Service or, at best, retired prematurely without his coveted knighthood. Nevertheless, Roberts always supported MacGregor - 'I know too much about him' - MacGregor hints darkly in his diary - and helped him to the appointment of Quartermaster General which, at that time, was responsible for all intelligence matters. Roberts could not have made a better choice; it was in this post that MacGregor did his most valuable work for the defence of India, organising Intelligence matters and training young officers to explore and report upon the wilder areas on the frontiers of India - and beyond - often at some risk to their lives.

Despite his faults MacGregor bore the stamp of greatness and deserves our admiration. Certainly he was ruthless, intolerant, ambitious and sometimes disloyal, but he was also very brave, tough, energetic, efficient and a superb organiser. And, as we have seen, he had a warm side and was a very humane man.* His epitaph might have been - 'Here was a man who got things done in the face of all difficulties but had no greater enemy than himself.'

'Getting things done' is a precious virtue in a military commander; surely it outweighed his faults.

* *As President of the Commission set up by General Roberts to try Afghani leaders who were suspected of being responsible for the massacre of Cavagnari, (Head of the Kabul Embassy), his Staff and garrison by the Herat regiments on 3 September 1879, MacGregor refused to recommend death sentences unless there was positive proof that those on trial had instigated, condoned or taken part in the massacre, despite Roberts' wishes to the contrary. MacGregor refused to regard the mere bearing of arms against the British invaders as being a capital offence. 'Bob's the most blood-thirsty little beast and will no doubt hang them all but I will have no part in it' - MacGregor noted in his diary. General Roberts did indeed hang them all and this caused a great outcry at Home which might have ended his career had this scandal not been buried by his subsequent success in the battle for Kandahar in September 1880, an event which was hailed at Home as a great National victory and Roberts as a National hero - rather undeservedly, perhaps, as MacGregor castigated it as being tactically chaotic.*

Nagaland Narrative*

MAJ GEN S C SINHA PVSM (RETD)

Though the Lushai Hills, now Mizoram, was the largest district of Assam, there was no motorable road to Aizawal, the district headquarters as long as this land remained a part of Assam. It was this sort of utter neglect of the North Eastern tribal areas, by both the State of Assam and the Central Government, that was the root cause of the long turbulent insurgency in Nagaland and later in Mizoram. It is only after many long years of military action, resulting in much avoidable suffering, loss of life and waste of valuable resources in the suppression of these rebellions that we are now able to discern a light at the end of the long dark tunnel. Along with the military action, it was the dedicated and competent service rendered by a group of devoted civil administrators of the ilk of Mr SC Dev, that played a significant if not a major role in bringing peace to these strife-torn lands.

Today, what strikes me as most strange, is that after all these tragic events people in the rest of India, who claim to be in the so called mainstream, and who stridently demand that these tribal people join this main stream even at the risk of losing their own identity and culture, should remain so ignorant about the lands and people of our North-Eastern region. This ignorance and disinterest is perhaps largely due to the lack of good books authored by Indians and other source material on these North Eastern areas and their colourful tribal people. There seems to be a reluctance on the part of the many Indians, who have in recent years gained much knowledge about these lands and their people during their service in these regions, to place on record their thoughts and experience. It is in this context that Mr Dev's most fascinating book on Nagaland and other areas of the North East is as timely as it is helpful in filling this void in our knowledge of the tragic events of the recent past and the likely developments of the future in this region.

There are few better qualified than Mr Dev to write about Nagaland. After having served for nearly sixteen years in the Indian Air Force, in March 1960 he joined the Indian Frontier Administrative Service. Although from the very start, he was a mature and an experienced administrator when he came to Tuensang, Mr Dev was most fortunate that his introduction to the Frontier administration was under the tutelage of such a brilliant, competent and a sympathetic administrator like Mr N F Suntook, who was later to head the R & AW. In all, Mr Dev served in various field appointments for eighteen years, during the last seven years of which he

* Nagaland - *The Untold Story* by S C Dev, Published by Mrs Gouri Dev, 106 Regent Estate, Calcutta - 700 092, April 1988, Pages 207, Price Rs. 200/-

was the Commissioner of Nagaland. He then went on to join the Ministry of Home Affairs as a Joint Secretary in charge of the North East Division. In his foreword to the book Mr BK Nehru, who was then the Governor of Assam, besides commending Mr Dev's personal courage, goes on to say that there was no officer in Nagaland, whether Naga or non-Naga, in whom all sections of the Naga people reposed as much blind trust as they reposed in him.

Unfortunately, Mr Dev has taken for granted the knowledge of his readers about Nagaland as otherwise I cannot find any explanation for a total lack of any maps or sketches of the various areas described in his book. In the next edition the inclusion of a few maps and sketches would undoubtedly make the narrative easier to follow and made interesting. There is also a need for some good editing to eliminate the large number of printing errors and spelling mistakes that have found their way in this edition. All the same this very interesting book is certainly a must for all unit libraries and for all those who are likely to deal with the many growing insurgency situations in various parts of our country.

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On Maritime Strategy*

VICE ADMIRAL MIHIR K ROY (RETD) PVSM, AVSM

Continental India (Northern India) and Peninsular India (Southern India) are seemingly bisected by the Vindhyas. The North was exposed to successive invasions by landpowers who viewed planet Earth as a conglomeration of extensive lakes surrounded by land. Conversely, mariners saw the water planet as islands surrounded by water!

The protagonists of the former were the heartland strategists spearheaded by the British geographer Sir Halford Mackinder and the German Professor of military sciences, Carl Haushofer, both of whom clairvoyantly predicted that a pivotal region (such as Eurasia) with a communication network of roads and railways could well determine the future course of history. This prediction was in a way proved right when the British Indian army conquered territory from Mesopotamia to Malaysia and then held the Empire together for nearly a century albeit with the Royal Navy controlling the oceanic choke points.

Southern India, on the other hand, was exposed to seapower from the 'Age of Discovery' when Vasco de Gama sailed round the Cape and landed on the West coast of India. These seaborne intrusions ostensibly for commerce resulted in the establishment of overseas colonies.

The high priest of this period was the American Admiral, Alfred Thayer Mahan whose treatise on the 'Influence of Seapower' was based on the use of seapower by the small island nation of England in carving out an Empire on which 'the sun never set'. But with the emerging necessity to design, construct and operate powerful fleets, seapower shifted to large nations with strong economic and industrial bases.

This enabled their navies to control sealanes, enforce quarantine and blockade, utilise international waters for intervention and thereby exercise the wide spectrum of options available for coercive diplomacy. Later day strategists such as Sir Julian Corbett continued to emphasise the command of the seas as the central theme but added that maritime strategy was the principle of governing a war in which the seas played a substantive part. He further enunciated that while on land, the object was the seizure and holding of enemy territory, it was securing the control of the sea that was the overall aim of maritime power. Admiral Jackie Fischer who was Britain's

* *Seapower and Strategy* : edited by Colin S. Gray and Roger W Barnett, Published by Naval Institute Press, Annapolis, Maryland, 1989, Pages 396, Price \$ 37.95

First Sea Lord during World War I went to the extent of stating that the army was a projectile to be fired by the navy! He went on to add that if the Navy was defeated, it was not invasion that Britain should fear but starvation! Sir Peter Gretton at the end of World War II was of the opinion that maritime strategy should be structured to support land operations. Admiral Gorshkov in his book 'The Seapower of the State' articulated the need for the Soviet Union to have a strong navy which was the genesis for the hectic ship building which inevitably catapulted USSR to super power status.

These basic tenets of seapower and landpower have been lucidly presented in part I of the U.S. Naval Institute Publication 'Seapower and Strategy' skillfully edited by Colin S. Gray and Roger W. Barnett.

Part II of this attractive edition chronicles maritime strategy in a historical perspective. It was the context between maritime powers such as Athens and Sparta in the Peloponnesian war followed by Rome and Carthage, England and Spain, Anglo-French rivalry and the two World Wars where Germany, Britain, U.S.A. and Japan were the oceanic matadors that were responsible for accelerating maritime technology as also increasing the investment in seapower.

Part III of the book dwells on the theory and practice of contemporary seapower, future trends as also the debate between continental and maritime strategies relating to geopolitics and seapower.

But no sooner was the book released in November '89, events in Europe and in the Soviet Union diffused the scorching rivalry between NATO and the Warsaw Pact countries which had hitherto provided the burning motivation for the striding advances in warship technology. However, the crisis in West Asia has confirmed the flexibility and effectiveness of seapower. Admiral Nelson, Collingwood, Spiridox, Tripitz, Fisher, Beatty, Togo, Yamamoto, Nimitz, Spruance, Halsey, Rickover and Gorshkov to name only a few practitioners of naval warfare, owed their claim to fame for being successful in their single minded quest for supremacy at sea.

Again in the emerging new ocean regime, the Exclusive Economic Zone has encroached nearly 37% of the ocean area (equivalent to the landmass of our planet) which in a way has imposed a defacto arms control by depriving seapower of its traditional advantage of universality and pervasiveness. In addition, the United Nations sponsored 'International Seabed Authority' has further resulted in groupism and new alliances between old rivals. Further while earlier it was *res nullius* (closed sea) and *res communis* (open seas) that were the rallying points for the colonial adversaries, it later

became 'Axis powers versus the Allies' and until recently 'communism versus the free world' which was responsible for the rapid advances in sea based weapons, surveillance, technology and instruments of destruction.

It is, however, becoming increasingly clear that religious fanaticism, fundamentalism, ethnic tensions, poverty and persecutions, narcotics and terrorism (wave of refugees has swelled to over 14 millions) are the emerging catalysts for channelling seaborne activities. A new chapter, therefore, seems to be unfolding which calls for a reappraisal of maritime strategy and force levels at sea to also meet these emerging threats.

India, however, continues to have no declared maritime policy notwithstanding President Soekarno's bid to change the nomenclature of the Indian ocean and the continuing spectrum of coups and insurrections in Seychells, Mauritius, Madagascar, Yemen, Horn of Africa, Trinidad, Liberia, Gulf, Maldives and Srilanka. The poaching for fish and alligators (North Andamans) by India's neighbours, the non-delineation of maritime boundaries with Pakistan and Bangladesh and the movements of refugees from Sri Lanka are some of the ongoing power kegs that have funded the expansion of littoral navies in the Indian ocean with three dimensional missiles, electronics and gas turbine propulsion. But in order to fully savour the delectable menu on sea power and strategy so analytically served up by well known writers - Wayne Hughes, John Gooch, Barry Strauss, Alvin Bernstein, Alberto Coll, Robin Ranger, Williamson Murry and Jeffrey Barlow in addition to Collin Gray and Roger Barnett one must have a cultivated palate to appreciate the differing options, objectives and capabilities of the use of seapower with minimum fuss and fanfare.

The United States Naval Institute's instructive book on 'Seapower and Strategy' explains the differing uses of the seas in support of a nation's policy against the historical backdrop of naval rivalry particularly in the Mediterranean and the Atlantic and perhaps rightly so as both China and India have barely grasped the cost effectiveness of investing in seapower. As a 'Naval Institute Author' I reflect the sentiments of my colleagues who like me eagerly look forward to the high standard of journals and books published by the U.S. Naval Institute which are stimulants to the few maritime pundits on the subcontinent not only to understand seapower but more so the power of the seas.

Book Reviews

Combatting Terrorism : The Official Report of the Cabinet-level Task Force Chaired

by Vice-President George Bush

Published by Diane Pub Co, Defense Information Access Net Work, Rancocas, NJ, 1987; Pages 42; Price \$14.95

This is the official report of the Cabinet Level Task Force, Chaired by the then Vice President George Bush, dated February 1986. Its purpose is to guide US Govt. Policy; hence it prints whatever is permissible for the public, recording that certain portions are not revealed and that some recommendations are being implemented.

The published report has an excellent and brief analysis of Terrorism and the Terrorist, be they individuals or State-supported. The evaluation of policy and range of responses to terrorism are reviewed. The range of resources available to the US Govt. and the role of different departments are considered. An interesting chapter covers the role of Congress, describing current legislation, pending legislation and potential legislation; these affect personal freedoms and interlinks between the Executive Branch and the Congress to control highly sensitive counter terrorist activity and ensure it follows democratic norms.

Terrorism depends for its success on publicity, where public opinion, the media, and over reaction are major factors for the terrorist groups; the effect of these is discussed supported by statistics. Finally there are conclusions and recommendations for policy, programmes, International cooperation, intelligence, communications and legislation. Altogether a concise and very instructive report on combatting terrorism; it could well be applied to any country with comparable problem.

-- Tindi

Combating Terrorism

by Maj Gen V Uberoy

Published by Directory Publications, A-26 Tribune Colony, Ambala Cantonment-133 001, 1989, Pages 223, Price Rs 150/-

The scourge of terrorism has been a feature of human society from its very beginning. Improvement in communications and the mass media have helped to bring it into sharper focus in the present day. There are other factors, too which have aided its rise into prominence; these are dealt with comprehensively in this well-researched book.

A broad definition of terrorism could be the use of violence,

intimidation, coercion of a community or government, for political ends. At the lower end of the scale, such acts could be performed by a small group or groups of people; at the upper end, we have examples before us of State terrorism. Insurgency is differentiated from terrorism, in that the former is a mass movement against the government of a country; whilst the latter lacks active public support and is not responsive towards their feelings for its actions.

This study is divided in two parts. The first part sets out reasons for the rise in terrorism. There must be a cause, whether political, ethnic, social religious, economic or ideological, or a combination thereof, to sustain it. It is assisted by indigenous and foreign support, in terms of money and material, and by the inertia and incompetence of a weak administration. There is a distinct nexus between smugglers, drug pedlars and terrorists. Where the former are tolerated by a supine government, the latter thrive on finance provided by the underworld. The modus operandi of terrorists is set out in great and absorbing detail.

Having assisted the reader to gain an understanding of terrorism, the author goes on the second part of his book, to suggest measures for dealing with it. His approach is systematic - as is to be expected of a thinking soldier - when he outlines the broad phases in which anti-terrorist operations can be divided from initial planning to liquidation. They are, first, discernment of the dimensions of the movement; second, containment, third, isolation; and finally, elimination. Quite rightly, he places intelligence to the forefront; it holds the key to success in the fight against terrorism. This chapter merits careful study.

In the final chapter, the author discusses the international aspects of terrorism. The easy availability of modern weapons, particularly those of mass destruction, place a very heavy responsibility on the international community, to band together to deal with this menace. The thought of nuclear, biological and chemical weapons falling into terrorist hands is too frightful to contemplate. There are welcome signs of growing international awareness and resolve, but much more needs to be done.

General Uberoy is to be congratulated on producing this comprehensive study, which should be compulsory reading for administrators and officers of the Armed Forces, who are assigned to such duties. Only when they have digested what the General has so compactly put before them, will they be able to win this, otherwise un-winnable, war.

-- Lt Gen M L Thapan PVSM (Retd)

Through the Straits of Armageddon : Arms Control Issues and Prospects
by Paul F. Diehl and Lock K Johnson

Published by University of Georgia Press, Athens, Georgia 30602, 1987, Pages 279, Price \$ 32.50

The single most important fact of our time is that the human race could be suddenly extinguished by nuclear war. Though this threat has made many of the best minds to search a way out, yet they still get trapped in its passages. An important starting place to resist its upward sweep is study and research into arms control and other peace keeping strategies.

In this context, the book offers to stimulate reading and research on Arms control issues. In the 'Foreword' to the book the former US Secretary of State Dean Rusk says :

"I am deeply confident that we will be able to add another forty years to that period since nuclear weapons were last fired in anger. By that time, the very thought of using these dreadful weapons may become unthinkable."

The Essays in the book provide the reader with basic concepts and tools to search for an end to nuclear war and on the prospects of our survival in the age of nuclear weapon.

-- G Satyavati

The Crucible of Peace : Common Security in Europe

by Stan Windass & Eric Grove

Published by Brassey's Defence Pub., London. 1988, Pages 156, \$ 28.00
(Common Security Studies No.1)

End of Second World War saw armed confrontation in Europe between the two super powers. The author attributes it to the acquisition of nuclear weapons by the USA, who wanted monopoly, making the Soviets apprehensive of their security.

The book consists of chapters by both civilian and military experts, on varied aspects of Security in Europe. They feel that whoever takes an interest in the solution of these problems will find thought provoking material which suggests balancing military expenditure with economic and social reforms.

With the initiative taken by Mr Gorbachev and the progress in 'Detente' by the two super-powers, the study may seem out of date as far as Europe is concerned but becomes useful for political and military planners in India

and Pakistan on how they can make ultimate peace in the sub-continent. I feel that some of the systems of offensive defence tried out by Pakistan during 'Zarba-Momin' have been taken from strategy suggested in the book and our study will help in our better assessment of our potential enemy's methods.

-- Brig Y P Dev (Retd)

New Weapons Old Politics : America's Military Procurement Muddle
by Thomas L McNaugher

Published by The Brookings Institution, 1775; Massachusetts Ave, N.W. Washington, DC 20036, 1989, Pages 251, Price \$ 34.95.

Acquisition of new weapons has been a big business in USA since the Second world War but nobody likes the process that brings these weapons into existence. The author shows that the problem is that the technical needs of military planners clash sharply with the political demands of Congress. Also there are number of huge industries and R & D that serve exclusive Defence Department along with mammoth bureaucracies and overarching political structure for ensuring that money is wisely spent. In reality, weapons procurement has become intrusive element in American political and economic life.

The author systematically examines weapon procurement since World War II and shows how repeated efforts to improve weapon acquisition have instead increased the harmful intrusion of political pressures into the technical development and procurement process. The design of new weapon systems and their integration into the force structure demand more care, time, and flexibility. Yet time and flexibility are precisely what political pressure removes from the acquisition process.

The author calls for meaningful reforms by less centralisation of procurements, less haste in developing new weapons and greater use of competition as a means of removing the development process from political interference and lastly paying completely for the Research and Development for full exploration of new technology.

Though this book deals with America's Military Procurement Muddle, it would be of valuable reading to our military planners in the Defence Ministry and Service Headquarters, Defence Research and Development Organisation, Defence Production Agencies as well as Members of Parliament and public interests in Defence issues.

-- Maj Gen K B Narang (Retd)

The Economist Pocket Guide to Defence

by Michael Sheehan and James H. Wyllie

*Published by Basil Blackwell and The Economist, 108 Cowley Road, Oxford
O X 41 JF(UK), 1986, Pages 269, Price Not Given*

The Economist Pocket Guide to Defence goes a long way to fulfil that need not only for the general public but also for serious students of global security issues by providing a handy concise and well written source of reference.

The Guide contains a number of entries in alphabetical order with write ups ranging from a couple of lines to short essays depending upon importance. It is possible to argue with both the selection and the length devoted to some of the entries. That is, by and large, understandable given the fact that perceptions vary and that the book is essentially for Western readers. The issues covered therefore are those of importance to the super powers and the industrialised states of Western Europe. The reader has perforce to accept that the topic of "Indo Pak Wars" occupies about the same space as the "Grenada Intervention" and is given a cursory treatment that, at a point, borders on inaccuracy by omission. However global power bloc issues are very well and comprehensively covered.

The Economist Pocket Guide to Defence will prove to be a useful addition to the collection of reference material with serious professional soldiers as well as with those who are in a position to influence policy making in defence.

-- Lt Col A K Chawla

Brassey's Multilingual Military Dictionary

*Published by Brassey's Defence Publishers, London, 1987, Pages 815, Price
£ 30 or US \$ 45.*

To help the international weapon buyer or those involved with joint manoeuvres or international combat, the Brasseys have produced a multilingual dictionary of military usage in English (also the US English), French (Francais), Spanish (Espanol), German (Deutsch), Russian and Arabic. 6960 words of most common military parlance are arranged alphabetically, each word in bold face, is followed by its equivalent in the other five languages. I found the equivalent words idiomatic and not literal.

Each cluster of words is numbered. The user looks at a word in his own language, colour coded index and finds a number in front of the word. He thumbs to the number and finds equivalent words in all six languages. The referencing is easy to use. A separate index at the back contains common ranks, compass points and names for tools etc.

The print and the quality of the paper is the usual Brassey : good and crisp. In the next addition the publishers could perhaps include an appendix of greetings, even soldiers need to be polite.

-- Col Balwant Sandhu

China Illustrata

by Athanasius Kircher, S.J.

Translated by Dr Charles D. Van Tuyl from the 1677 original Latin edition
Published by the Indian University Press, Bacone College, Muskogee, Oklahoma
74403, 1987, Pages 228, Price Not Given

Having been posted in Hongkong for nearly four years, I was interested in books on China to understand the people of China, their way of living, customs and more so in their art. When I saw "China Illustrata", I wanted to read more about the ancient China and found the book quite extraordinary. It is a translation from a Latin work by a Jesuit scholar Fr Athanasium Kirker. It is not only about China of centuries ago and a picture of the old China Empires but also about its neighbouring countries - including India - from the point of view of the Jesuit missionaries, based mostly on their personal experiences but also on a variety of western sources and travellers such as Marco Polo. It shows how China appeared to the first European missionaries and travellers who brought quite a change in the Chinese society and their belief by offering Western ideas and technology. The missionaries obtained great influence because of their zeal and advanced knowledge and they found it to their advantage to carry on the missionary work.

The book brings out various aspects of China and the adjoining countries and it makes interesting reading particularly about the spread of Christianity in these countries.

-- Maj General C N Das (Retd)

The Soviet Union and India

by Peter J.S. Duncan

Published by Routledge, 11 New fetter Lane, London EC UP 4EE, 1989, Pages
150, Price Not Given

The principal aim of the foreign policy of the Soviet Union, as of any country, is to seek to guarantee the security of the State. India's political and strategic importance arises from its geographical position, near to the Southern frontier of the USSR and sharing borders with China and Pakistan. In addition, the geographical position of India, surrounded as it is by the Indian ocean and close to the unstable gulf region, gave it particular

importance. After the Soviet invasion of Afghanistan, India was seen as a possible point of pressure on Pakistan.

Relations with India have economic benefits as well as costs. India is seen as a source of relatively inexpensive foodgrain, raw materials, consumer goods and semi-manufactures which, owing to the rouble-rupee agreement, can be paid for in soft currency. Furthermore, India is an outlet for Soviet manufactured goods which might be had to sell in the increasingly competitive world market.

The book clearly brings out the important landmarks in the Indo-Soviet relations during the period 1971-1989.

-- Maj General B D Kale (Retd)

The Gorbachev Strategy : Opening the Closed Society

by Thomas H. Naylor

*Published by Lexington Books by D.C. Heath & Company/Lexington, 1988,
Pages 253, Price Not Given*

25 February 1986, was a landmark day, when General Secretary, Mikhail Gorbachev made his second historic and determined attempt to destalinise the Soviet Union by introducing "glasnost" (which he calls his radical reforms) to open the tightly closed Soviet Society, at the 27th Congress of the Communist Party of the Soviet Union (C.P.S.U). Most political analysts and Russia - watchers had thought that Gorbachev would go the Khrushchev way, But the author - Mr. Thomas H. Naylor, an American businessman and an economist, in his excellently written book had no doubt that Gorbachev would succeed where Khrushchev had failed some three decades ago. Gorbachev has not taken a false step as yet and as things stand, the master strategist is likely to carry the day.

Naylor carefully assesses all the key features of Soviet life - its economy, culture, politics, military, agriculture, foreign and trade policies and even Gorbachev's managerial style and concludes that the reforms that Gorbachev is attempting are real because they are necessary if the Soviet Union is to survive. He further believes that rampant government corruption, illegal black market, high death rate, chronic alcoholism and drug abuse, pushed Gorbachev to dare to go in for 'glasnost' with speed as he is convinced that without coming to grips with the decadent Soviet culture, economic reforms cannot be implemented (Khrushchev had overlooked this 'cardinal point and failed).

Mr. Gorbachev is essentially a man of peace and the touchstone of his foreign policy is world peace for which he is desperately and sincerely

trying against heavy odds both at home and abroad. His achievements especially in opening the historically weighted down and communist dominated Soviet Society and tearing down the 75 years Red Banner, in relatively very short span of time is truly remarkable.

An easily readable and a good reference book.

-- Brig Rai Singh MVC, VSM (Retd)

Stories of Heroism - Part I

by B. Chakravorty, MA, PhD

Published by Director Publication Division, Ministry of Information and Broadcasting, Government of India, Patiala House, New Delhi - 110 001, 1988, Pages 64, Price 15/-

This is a matter-of-fact collection of cryptic accounts of the winners of the Param Vir Chakra and the Ashok Chakra, the two top awards of Independent India for most conspicuous bravery in the face of enemy or otherwise, respectively. Though an impression has been given in the Preface about a thorough research having been done, which is sought to be substantiated by a list of books in the bibliography; the reader is bound to get a taste of blandness that permeates through the skimpiness. That notwithstanding, this effort at public relations, is definitely worth a browse.

-- Lt Col A K Sharma

Sailing and Soldiering in Defence of India

by Sureshwar D. Sinha

Published by Chanakya Publications, F10/14, Model Town, Delhi - 110 009 1990, Pages 231, Price Rs 180/-

"Sailing and Soldiering in Defence of India" is the autobiography of the author Commander S.D. Sinha. He describes his early life at the R.I.M.C, the training in UK with the Royal Navy and thereafter his service in the Indian Navy where he rose to the rank of a commander. Though he was likely to achieve higher ranks, he asked for premature retirement due to personal reasons.

This autobiography is different from other biographies in that the author has critically examined various events which took place in his career and those after retirement. He has analysed in depth the 1962, 1965 and 1971 wars and has described the merits, demerits, excellencies and deficiencies of concerned policy makers. He has clearly brought out that though in a democratic set up, the overall control of the defence services may be in the hands of politicians, it is imperative their running is left in

the hands of professionals who are familiar with the weapons and equipment and the men they command.

Commander Sinha has at length analysed the operation "Trident"- the attack by missile boats on Karachi harbour and the ships anchored outside the port in the 1971 war. He has stated that Admiral S.N. Kohli, the then Flag Officer Commanding-in-Chief had some reservations regarding the attack because he felt Karachi was being heavily defended with all ships of the Pakistan Navy patrolling outside the harbour. The same point has also been brought out by Admiral S.M. Nanda, the then Chief of the Naval Staff when the author interviewed him. However, Admiral Kohli in his book "We Dared" has made no mention about this. On the other hand one gets the impression that the plans for attack on Karachi harbour were drawn by the Western Naval Command in consultation with the Naval Headquarters. In all fairness to Admiral Kohli, the author should have also interviewed him and clarified the position.

A very appealing and absorbing book which should be read by defence officers, politicians and bureaucrats. The latter two may find some of the remarks not so pleasant but nevertheless they are useful and to be thought over. The book would be of particular interest to the naval officers who were in the service about the same time as it narrates some of the incidents which are amusing and bring back happy memories of the fine service to which they belonged/belong.

-- Captain R P Khanna AVSM, Indian Navy (Retd)

Valour and Sacrifice : Famous Regiments of the Indian Army

by Lt Col Gautam Sharma

Allied Publishers, New Delhi, Rs 150/-, Pages 319.

This book succinctly encapsulates the history of certain regiments of the Indian Army that existed at the onset of World War II - the Punjab Regiment, the Grenadiers, the Rajputana Rifles, the Rajput Regiment, the Jat Regiment, the Sikh Regiment, the Dogra Regiment, the Garhwal Rifles, the Kumaon Regiment - plus the Madras Regiment which was re-raised after the commencement of World War II, and was, in fact, the oldest regiment of the Indian Army, allowing for certain merged State Force units being older. eg, the Mewar Infantry of Rana Partap, now 9th Battalion the Grenadiers, originally raised in 1303.

It would have been felicitous if all the infantry regiments of the Indian Army existing today could have been encompassed in this book, for all are equally famous and valorous, whether pre-World War II or not. All the

existing regiments have striking tales to tell. This was, however, not to be, for certain reasons, apparently beyond the control of the author.

In fairness to the several infantry regiments omitted from this publication, the dust jacket is thus strictly not correct when it avers, "for the first time, an attempt has been made here to consolidate the stories of valour and sacrifice of these men."

Insofar as the present book is concerned, it is a laudable endeavour of ten years' research, and will have a place in the very extensive bibliography of the Indian Army. The author, however, rightly adds a caveat, "This can by no means be an exhaustive account. It is not meant to be so."

-- Lt Gen S L Menezes, PVSM SC (Retd)

The Second Maratha Campaign, 1804-1805 : Diary of James Young-Officer, Bengal Horse Artillery and Twice Sheriff of Calcutta

by D.D. Khanna

Published by Allied Publishers Limited 13/14 Asaf Ali Road, New Delhi - 110 002, 1990, Pages 204, Price Rs. 175/-

Professor D.D. Khanna, who was head of the Defence Studies Department of the University of Allahabad, has ferreted out the Diary of James Young, a British Artillery officer of the English East India Company's forces in India, from the numerous invaluable manuscripts held by the British Museum, and edited it.

The Editor deserves to be complimented for taking great pains to identify the author, who preferred to remain anonymous for fear that he might incur the wrath of his superiors for criticising in the sharpest terms his superiors, not excluding General Lake, the Commander-in-Chief, and Lord Wellesley, the Governor-General of India.

The Diary of James Young, or the Journal as he calls it, has been rightly described by Professor Khanna as 'magnificent historical document for military and general historians'. The Journal does not deal exclusively with the military campaigns of the later phase of the Second Anglo-Maratha War (years 1804 and 1805), providing graphic accounts of the numerous marches, sieges and engagements of General Lake's Grand Army which confronted the Maratha Chief Jaswant Rao Holkar, the Raja of Bharatpur, and the Rohillash and Pindaris, but also provides other interesting vignettes of regimental and local politics. James also analyses and comments on British Policy in India in the military, political and social spheres.

The Diary, in short, makes very interesting reading. Its value is increased by several drawings and sketches which the author drew to illustrate battle plans etc. No less valuable is the Introduction by the Editor, Professor

Khanna, who has gone far beyond the confines of the Diary in terms of time and space, and furnished details about the thoughts and views and career of the author who won the admiration of the Indians in his lifetime and will do the same now when his Diary has seen the light of the day thanks to the remarkable effort of the Editor.

-- Dr K M L Saxena

Troubled Days of Peace : Mountbatten and South East Asia Command, 1945-46

by Peter Dennis

Published in paper back by Manchester University Press, Oxford Road, Manchester, M 13 9 PL UK, 1987, Pages 270, Price \$ 13.95

At the end of the war against Japan, Lord Mountbatten, as Supreme Allied Commander, South East Asia, faced problems possibly as difficult as any, during the war against Japan dealing with over three quarters of a million Japanese troops, rescuing prisoners of war and internees; and restoring law and order. The first two were difficult enough, given the vast size of the theatre and the inadequate quantum of forces, mainly Indian divisions available for the purpose, but the third brought these troops into conflict with the emerging nationalist movements, and his commands coming into conflict with the returning colonial powers.

Lacking guidance from the British Government on account of the distance and the latter's unfamiliarity with the new emerging situation on the ground, different to that in 1940, Mountbatten and his commanders largely shaped their own policy. The surrender ceremony at Singapore on 12 September 1945 had been deceptively easy, but with the exception of Burma and West New Guinea, the area under Mountbatten's command had not seen the Japanese defeated in battle. Save for parts of Borneo and some of the outer islands of the Netherlands East Indies, the other Japanese forces had not been engaged in battle, and it was not certain that they would obey the Emperor's order to lay down arms. Apart from their numbers being large, they were scattered over vast areas. Their prisoners and internees numbered hundreds of thousands, and their whereabouts were, for the most part, unknown.

Much of the economic structure of South East Asia had been destroyed by the Japanese occupation, and the prospect of famine pervaded the region. In addition, the Indian divisions were required to return to India. The final outcome was not all that Mountbatten claimed, neither, allowing for the constraints, was it the disastrous, ill-conceived military interference that some portrayed as this admirable book brings out.

-- Lt Gen S L Menezes, PVSM, SC (Retd)

An American Island in Hitler's Reich

by Charles B. Burdick

Published by Markgraf Publications Group, P O Box 936, Menlo Park, CA, 1987 Pages 120, Price \$ 32.95

One is used to reading about life and exploits of inmates of prisoner of war camps, the title of this book suggests something different. It is about the experiences of diplomats of the American Embassy and journalists who were in Berlin when Germany suddenly declared war on the USA in December 1941. They were interned in a hotel in a small town near Frankfurt until their release in Lisbon in May 1942.

The stay in this hotel from December 1941 to May 1942, which included married couples as well as single males and females necessitated organisational skills to cater for discipline, occupational activity, recreation and other forms of human behaviour. Even romance flourished and there was a case where a German girl friend from Berlin managed to slip through the tight Gestapo controlled security and spend a night in the hotel. A Bad Nauheim "University" was established as well as a clandestine newspaper which was nicknamed "The Pudding". Two defections took place to the Germans.

The book does not at all portray a picture of German domination or cruelty. Behaviour was correct and generally cooperative. There were the usual bureaucratic and administrative bunglings. A change from the usual war time books in which the author's side is shown as paragons of virtue and the enemy as villains. A good book which reflects the life of civilians as opposed to soldiers in captivity.

-- Maj Gen R L Chopra

Forgotten Legions : German Army Infantry Policy - 1918 - 1941

by S.J. Lewis

Published by Praeger Publishers, 521, Fifth Avenue, New York, NY 10175, USA 1985, Pages 189, Price Not Given

With a resurgent Germany on the move again, the second time in this century, any book pertaining to any aspect of the developments in that country during the inter-war years cannot fail to attract attention. The present book, intriguingly titled "Forgotten Legions" supposedly based on original German sources so far unavailable to scholars, claims to set forth a true analysis of the German Army's infantry policy as fashioned by the German General Staff and to render due honour so far denied, to the infantry element, the erstwhile "Queen of Battle" which comprised eighty percent of the field units.

The preface gives the impression that the author was driven to write this book due to his unhappiness with the existing anglo-saxon literature on matters concerning the German Army leading to and during the course of the Second World War. The author, obviously does not admire the earlier authors who he calls "popular military writers", people who could not be bothered to research facts, and instead, based their studies mainly on two memoirs of German generals which happened to be translated into the English language immediately after the Second World War.

With such a beginning, one is apt to pick up the book with high expectations, especially so since original German records and other documents seized by the Americans have apparently only recently been de-classified and made available to research scholars. Indeed the bibliography at the end of the book is impressive.

The book, unfortunately, belies ones hopes. There is little, of any consequence, that is new. The few campaigns analysed have been covered very sketchily and, one regrets to say, not without prejudice. In actual fact the book reads more like an apologia for the German General Staff who have been depicted as a band of poor, over-worked men driven to work overtime by "a single party, totalitarian dictatorship". Has one not heard that plaint elsewhere?

-- Col R R Chatterji, AVSM (Retd)

Life in the Rank & File : Enlisted Men and Women in the Armed Forces of United States, Australia, Canada and the United Kingdom.

by David R. Segal & H Wallace Sinaiko

Published by Pergamon-Brassey's International Defence Publishers, 1340 Old Chain Bridge Road, McLean, Virginia, 22101, U.S.A. 1986, Pages 283, Price \$11.50 (Soft bound)

The explosion of new technology and the categoric re-orientation of social perception and attitudes in the modern world, have inevitably impacted upon professional soldiering as well as traditional concepts of military leadership. It has therefore become necessary to continuously and progressively review the changing patterns of the vital human resource - both men and women, that fill up the large cadre of enlisted manpower voluntarily. Social scientists and national policy makers would be greatly concerned with the results of such studies.

In countries like the USA, Canada, Australia and United Kingdom, Social mobility, ethnic diversity and influx of migratory population raises many issues. New non-traditional sources of manpower have to be drawn upon. The increasing proportion of women vis-a-vis men among the enlisted, long spell of peace-time soldiering in distant lands, and the requirement

of near-instant state of readiness for combat, offer their own package of tensions for the men and women in the rank and file of the US Armed Forces or the other English speaking countries, and perhaps many others.

"Life in the Rank and File", edited by David R Segal is compendium of review and projections on the above issues by sociologists, historians, psychologists and professionals - soldiers as well as officers, relating to the enlisted men and women of the four nations. Amongst other aspects, the survey and review of the changing attitudes, self-image, leadership perspective, civil-military interaction and the responses of the serving combatant to his functional environment in the land, sea and air forces, offer a very delectable fare to the reader.

-- Maj Gen S K Talwar (Retd)

Gentle Knight : The Life and Times of Maj Gen Edwin Forest Harding
by Leslie Anders

Published by The Kent State University Press, Kent, Ohio 44242, 1985, Pages 384, Price \$ 27.50

This biography by military historian Leslie Anders gives the reader a lucid picture of a career army officer and his role in American Society during the first half of this century.

Maj Gen Edwin Forest Harding, a contemporary of Douglas Mac Arthur was known for his scholarship and culture. He became the first Chief of Military History of the US Army.

This book is invaluable for the student of Military History as it gives the background, education and social life of the typical American Officer. It also examines the force that helped in shaping his character. It deals at length with institutions like West Point which trained them. The disciplined life of the cadet and his social life gives the reader a picture of the social norms, attitudes etc which shaped top army commanders during the period between the two world wars. This book will be appreciated by the general reader as well as it gives a broadening view of the army life during our time.

-- Maj Gen G K Sen (Retd)

The Space Station : A Personal Journey
by Hans Mark

Published by Duke University Press, 6697 College Station, Durham, NC 27708; 1987, Pages 264, Price \$ 24.95

Hans Mark, a scientist by training, describes the race between Russia and USA in the development of space technology. USSR starts with launching

the Sputnik of 4 Oct 1957 - USA follows with Explorer I 3 months later and so on. Landing on the moon in 1969, development of the Challenger Space Vehicle Shuttle concluded in late 1960s with a number of successful flights, followed by an accident on 28 Jan 86 inspite of objections raised by THIKOL engineers - a case of lack of communication between the management and the engineers.

-- Maj General Pratap Narain (Retd)

Battles of the 20th Century

by Chris Bishop & Ian C Drury

Published by Temple Press/Aerospace, an imprint of the Hymlyn Publishing Group, Michelin House, 81 Fulham Road, London SW3 6RB (U.K.) 1989, Pages 208, Price \$ 16.95

This is a unique pictorial history of nearly hundred famous battles spanning the whole of the 20th Century from the Battle of Tsushima (1905) which established Japan as a world power right upto the Air War over Lebanon. This book contains some 800 photographs depicting famous land, Sea and Air actions. This serves a unique purpose as it provides a comparative study of warfare, weapons and uniforms of various armies of the world from the beginning of the century to-date. All major battles including some famous battles of the first and Second world war have been comprehensively covered. It is a remarkable achievement to produce in one volume such mass of details.

-- Maj Gen Afsir Karim (Retd)

The Illustrated History of World War II

by Barrie Pitt

Published by Temple Press/Aerospace, an imprint of the Hamlyn Pub. Group Limited, Michelin House, 81 Fulham Road, London SW36RB (U.K.) 1986, 316 pp. Price \$ 14.95

We have a score of such chronicles by now and more would continue to come from enterprising people who see history in differing shades and lights. This book is definitely well researched, thematically captioned and illustrated with good maps, rare photographs and drawings of equipment, weapons etc. It also focuses on some of individual fighters and events - Adolf Galland, the ace German pilot of the Battle of Britain, Orde Wingate, Bomber Harris, the trauma of the war, the nuclear bombs, the 'little boys', that ravaged Hiroshima and Nagasaki and brought about the surrender of the formidable Nippons. Regrettably, it sidetracks the Indian and the African contributions to the war. The book begins with 'Clouds of Conflict', moves to its 'prelude to blitz', and ends up with 'End in Europe' and 'victory over Japan'. Some day when Germanies unite and Japan rearms we hope they

would produce equally interesting historical records! They had, after all, made world war II possible!

-- Brig Chandra B Khanduri

Pine Gap : Australia and the US Geostationery Signals Intelligence Satellite Program

by Desmond Ball

Published by Allen Unwin Australia Pvt Ltd, P.O. Box 764, 8 Napier Street, North Sydney, NSW 2060 Australia. 1988, Pages 121, Price \$ 9.95 (Hard back)

Authored by Professor Desmond Ball, Head of the Strategic & Defence Studies Centre at the Australian National University Canberra, and one of the world's leading analysts of nuclear strategy and international security, the book discusses the character and the use of the most important and most controversial U.S. installation on the Australian soil. Set up at Pine Gap, near Alice Springs, Northern Territory, under an Agreement signed between the governments of Australia and U.S.A. on 9 December 1966, this U.S. Satellite ground station facility (Code-named MERINO) has been controlled by the U.S. CIA to collect a wide range of foreign signals, including telemetry connected with Soviet missile tests, radar emissions and telecommunications. Later, it might have been used for monitoring violation of strategic arms limitation agreements which is known as national technical means of verification (NTMV). This espionage role created a great deal of heat amongst the Australian intelligentsia, especially its radical part. It has been argued that Pine Gap could be a likely Soviet target in any strategic nuclear war between the two super powers.

Desmond Ball has interviewed a large number of actual operators - both American and Australian - of the Pine Gap facility and consulted a large number of useful published and unpublished documents to unravel the mystery of the Pine Gap. He has included 13 interesting Tables in this book, giving a lot of informative data on US Satellite launches, Soviet ICBM flight test launches, anti-satellite (ASAT) tests, Pine Gap radomes, etc.

No doubt, this well-researched publication will interest all those who want to know about US military posture in allied countries.

-- Dr B C Chakravorty

War Report : The War Correspondent's View of Battle from the Crimea to the Falklands

by Trevor Royle

Published by Mainstream Publishing, 7 Albany Street, Edinburgh EH1 3UG (UK) 1987, Pages 240, Price \$ 12.95

This book covers war correspondent's view of Battle from the Crimea

to the Falklands. This study traces the story from Russell's pioneering work in the Crimea to the press, radio and television, journalists who accompanied the British forces in the Falklands in 1982. In particular, it investigates the lives and careers of six of the greatest war correspondents; GW Stevens, Edger Wallace, Charles Repington, Claud Cockburn, Chester Wilmot and James Cameron.

This book brings out impressions of the men involved, some of which are not generally known. There are some interesting impressions of Kitchner which were not mentioned in official history.

A useful book which gives a good insight into war reporting apart from bringing out various impressions of people who were present at the time and place. Makes interesting reading for people interested in war history.

-- Brig R N Bhargava

How to be a Successful Leader

by Lt Gen Dr ML Chibber PVSM, AVSM, PhD

Published by ANA Publishing House, C-98 Defence Colony, New Delhi - 110 024, Pages 195, Price Rs. 125/-

This is the third and an enlarged edition of a book first published in 1982. The author is eminently suitable to write about leadership in the field of Defence Services. He has had a distinguished record of service in the Army and served the country in peace and war in various crucial appointments, finally holding the top Command of the Northern Army. He has written a number of books, articles and monographs on Defence and defence related issues.

His book on leadership contains some very essential and basic knowledge in the art and science of man-management in the armed forces. In addition, it provides the young officers a very wide cultural background to Indian ethos based on ancient, medieval and modern history and religion. The principles of Leadership evolved through historical study and analysis of top Military Commanders, extracted from well-known military classics have been clearly explained in the book for the benefit of the young officers.

The book contains a bibliography which lists almost all the well-known works on Military History. This will be useful for further reading.

The book in its first and second edition has already proved its worth necessitating a third enlarged edition, which is available at a concessional price of Rs. 50/- for officers of the Indian Armed Forces.

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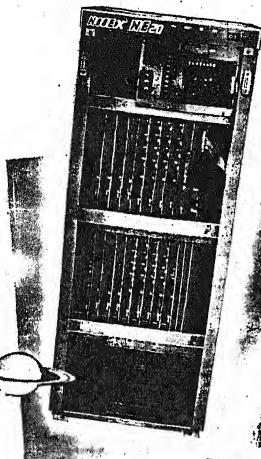
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